BRITAIN'S BEST-SELLING MACINTOSH MONTHLY

MACFORMAT

NEW! CD-ROM WITH THIS ISSUE

ISSUE 13 ■ JUNE 1994 ■ £4.95 WITH CD-ROM

SYNDICATE

SimCity meets Reservoir Dogs?
Demo on disk, review inside

MEMORY MAGIC!

You can create more RAM and disk space out of thin air! We try out the software magic wand...

20 of your most common Mac problems solved

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CD EDITION
DISK 1 JUNE 1994

MACFORMAT

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Plus
All the files from the normal MACFORMAT disk

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See MACFORMAT magazine for more details
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SUPERIOR SOFTWARE SOFTline SERVICE AND SUPPORT

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Please check for availability.

Latest Releases...

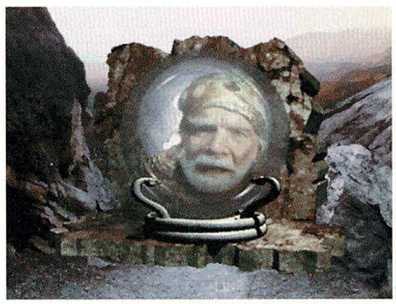
Return to Zork. An epic adventure... underground. Based on the infamous Zork series this outstanding adventure includes fully rendered 3D graphics, original music, over an hour of spoken dialogue and video starring known actors.

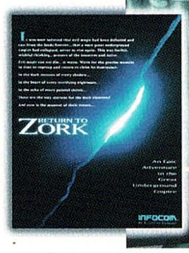
The interface has been redesigned from the ground up into what is probably the most intuitive adventure around, including the ability to have 'real' conversations. Character responses are determined by 'your' body language through a simple point and click icon system. In addition you have a camera and tape recorder which can be used to record conversations and store images containing vital clues.

'It's of such unparalleled quality that it must become the model for CD ROM adventure game designers' - CD ROM Today magazine.

'You'll see the best use of full-motion video in any CD ROM... You're not watching a movie. You're in a movie...' Multimedia World.

CD ROM SRP £42.54



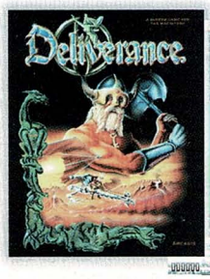


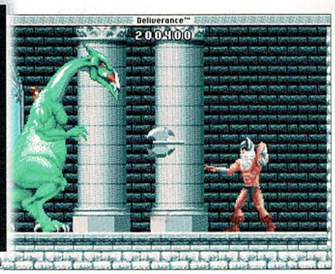
Deliverance. Finally a real no holds barred arcade action game for the Mac. Hack your way through the lands of Llyn Cerrig to defeat Tnarom who is threatening to destroy it. Start in his palace to free the fairies and guide them safely through the pits of fire, enchanted forest and the winged warrior filled skies.

The game can be played on a small or large screen in either 16 or 256 colours.

The action is relentless and non-stop, including deadly end of level guardians.

SRP £34

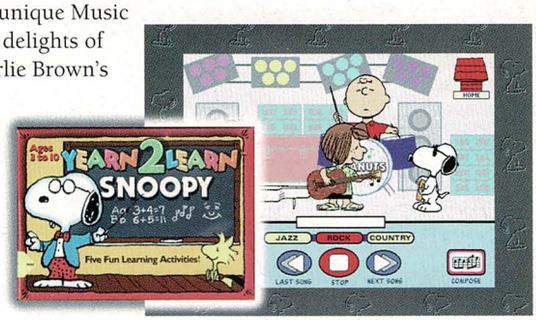




Yearn 2 Learn—Snoopy. They're back with another installment of the Yearn 2 Learn series. Snoopy and the gang continue to make learning fun for children. This new collection of entertaining and educational games is loaded with fun and learning for the whole family. The suite includes more Math games: addition, subtraction, multiplication and division, and word games for pre-readers with additional reading games. The unique Music Fun introduces children to the delights of sound and music through Charlie Brown's animated band.

Finally the Face Maker allows children to create their own faces complete with varying expressions and looks. All these activities ensure that learning is never dull.

CD ROM £45
Floppy Disc £45



All prices shown are exclusive of VAT.

Softline Distribution, Mill House, Mill Lane, Carshalton, Surrey SM5 2WZ
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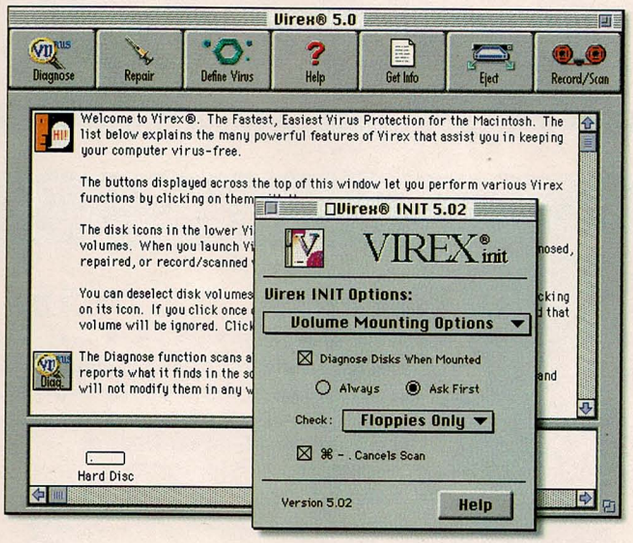
Essential Mac Enhancers

The safest Mac protection and the ultimate Finder navigator


Virex® 5.0
Diagnose
Repair
Define Virus
Help
Get Info
Eject
Record/Scan
Welcome to Virex®. The Fastest, Easiest Virus Protection for the Macintosh. The list below explains the many powerful features of Virex that assist you in keeping your computer virus-free.
The buttons displayed across the top of this window let you perform various Virex functions by clicking on them
The disk icons in the lower Vi
volumes. When you launch Vi
repaired, or record/scanned
You can deselect disk volumes
on its icon. If you click once
volume will be ignored. Click
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reports what it finds in the sc
will not modify them in any w
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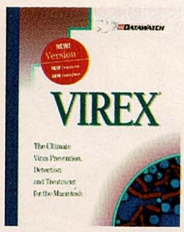
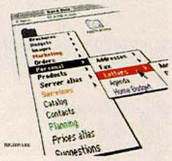
Version 5.02
Help

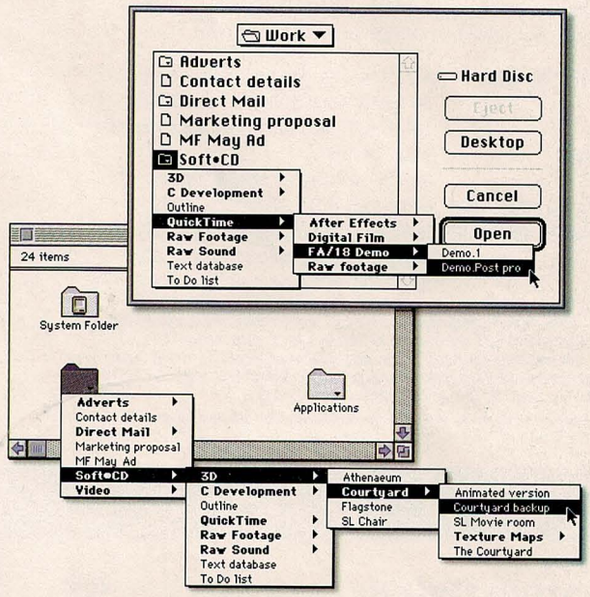


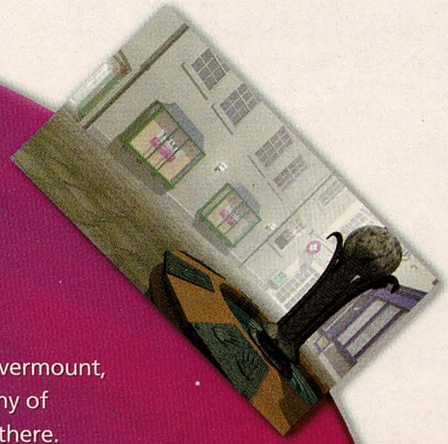
Virex 5 is the comprehensive solution to the threat of Macintosh computer viruses. Not only does Virex tell you when there is a virus present, it will define and repair all files containing a known virus. It can also detect new or previously unknown viruses. Virex 5 offers the fastest and most secure virus protection available today through its patented SpeedScan technology. You can also take advantage of the Annual Subscription Service to ensure your Mac stays clean and healthy by receiving new updated virex discs through the year. **SRP £69, With a one year subscription £149**

PopupFolder



PopUp Folder. If you're a Mac user then you'll be familiar with double-clicking on folder upon folder to slowly work your way around the Finder. When you click and hold down with Popup installed each folder and drive (even server volumes) sprouts a little pop up menu which shows all the files and sub-folders within it, instantly. Using the menu you can select one of the folders within and see even further—up to five levels deep. You can even drag and drop files onto these submenus! Popup Folder also adds hierarchical menus to your apple menu and popup access from the open and save dialog boxes. It's the ultimate finder navigator that no Mac should be without! **SRP £39**





SOFT•CD

If you're not one of the lucky ones to get the Soft•CD MacFormat covermount, or you don't have access to a cd rom drive then pop along to any of the participating dealers below and use Soft•CD Sneak Preview there.

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If you can't get along to one of the above then call Softline on 081 401 1234.

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The Finder

MACFORMAT

Welcome to another issue of MACFORMAT, Britain's best-selling Macintosh monthly. Whether you're an old hand or a newcomer, we'll keep to up to date with the news, reviews of interesting and affordable products, and tips and techniques to help you get even more out of your Mac, whatever you use it for!

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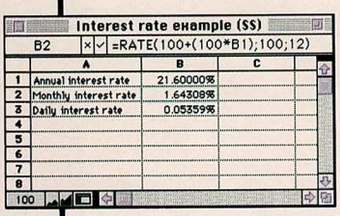
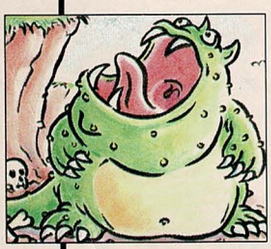
HOW TO DO IT

Creative Colour 58
How to use colour on a page to guide your readers, highlight what's important and enhance your message



Count the Cost 60
Use your spreadsheet's financial functions to find out how much that loan is really going to cost you

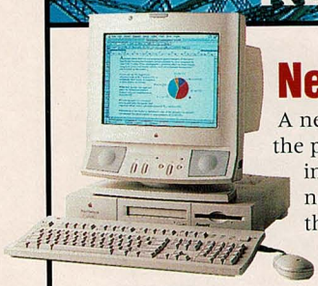
HyperCard Properties 62
Alter fields, fonts, buttons, text styles and much more using 'properties' – plus your HyperCard questions answered



You and the Law 68
Whatever publication you're producing on your Mac, you need to beware of libel and even contempt of court. We reveal all!

Into the Internet 82
Got the hang of comms? Ready to try connecting to the Internet? We show you how to do it

REGULARS



News 15
A new modular audio-visual Mac for half the price of existing AVs; a 'home publishing' package for under £100; what the next version of the Finder will look like; the newest game from Bullfrog, the team behind *Populous* and *Syndicate*; and much more

Apple Talk 20
Your views on everything from out-of-stock games to *ResEdit* and MACFORMAT, revealed in an orgy of T-shirts

What's New 22
Andy Storer returns from the PowerMac launch party in New York with the latest from Apple's big names. Find out how 'Point and Click' is being replaced by 'Ask and Tell', and why the Newton's such a great deal... in the US

Special Offers 89
MACFORMAT has gathered some not-bad Mac products and offers them to you at pretty reasonable prices, we reckon

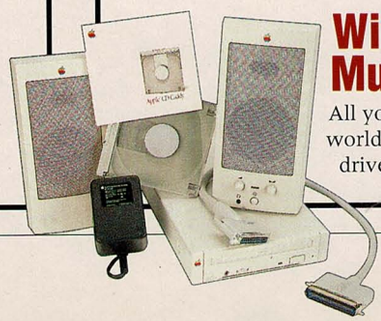
Back Issues 94
If you've been meaning to catch up on something in a previous MACFORMAT, we must say you'd be well advised to act quite soon, really

Subscribe! 98
It wouldn't be a bad idea... No, it's no use. We just can't pretend not to be excited any longer! *Just think what you might be missing!*

Free Reader Ads 100
Buy buy buy! Sell sell sell! Contact contact contact! No, somehow this approach isn't working either...

Buying Advice 101
Whether you're buying by mail order or in person, it helps to understand your rights and how to protect them...

Next Month 105
Find out what's coming in the next issue of the magazine they're already calling MACFORMAT!

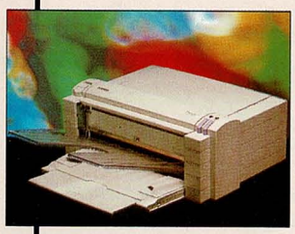


Win an Apple CD Multimedia Kit 106
All you need to step into the dazzling world of multimedia – Apple CD-ROM drive, speakers, cables, the lot! Brilliant!

REVIEWS

Print Shop Deluxe 36
It's fun. It's friendly. It helps kids learn the principles of DTP. Its results are great, and it costs all of £55. Tempted?

ColorStation 40
An all-in-one graphics, image-editing and print-enhancing program from France, at a bargain price



Primera Printer 42
Dye-sublimation quality colour printing becomes more affordable with Fargo's new Primera printer

Cyberspace! 45
Multimedia brings the future (and the American past) to you in this latest crop of new CD-ROM releases, including:

- American History
- Instant Art
- RedShift
- Shapes 1 & 2

Story Book Weaver 50
Now children can create their own multimedia stories, complete with sounds, from ready-made elements

Music 52
Want a personal music coach to teach you ear training and sight reading? The latest Mac music news, plus reviews of:

- Claire
- Dr Rave
- Latin Guitar

It's *so* easy: 4D First 55
A relational database for just £99? No, it's not a demo, and it does have a full range of features, including programming and a graphing function. So what do we think of it...?

Shareware 77
A breathtaking bag of low-cost and no-cost programs – games, genealogy, presentation, even money management

PowerBook Tools 84
A neat little package of useful utilities for PowerBooks, with a better battery monitor, hotkeys and more

Games reviews
The latest games for your Mac – everything from a pinball simulator to a bundle of board games including chess, backgammon, bridge and Go

- Astro Chase 3D 92
- Caesar Deluxe 95
- Crystal Caliburn 88
- Strategy Games 96

FEATURES

MEMORY MAGIC! 27
You can have more RAM and more disk space without having to pay for any extra hardware. We explore the software options that could more than double your RAM for under £100!

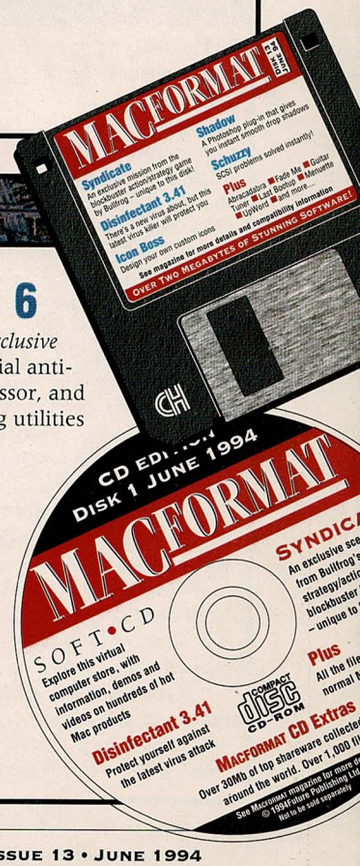
20 of your most common Mac problems solved – Mac Answers 70
MACFORMAT's experts tackled a range of your real-life problems at the recent Computer Shopper Show. Here are the answers to 20 of the most commonly-asked questions

SYNDICATE 86
Can you survive this future? Governments have lost the plot completely, syndicates are in control, and violence and crime are rampant. So, no change there then

COVER DISK

Your Cover Disk 6
Sample *Syndicate* for yourself with our *exclusive* demo, PLUS a new version of the essential anti-virus program, a useful little word processor, and a range of handy productivity-enhancing utilities – there's even a guitar tuner!

Your CD-ROM 10
If you've got hold of one of the limited edition of this issue of MACFORMAT with a CD-ROM covermount, you have everything that's on the disk version PLUS a virtual shopping centre where you can sample hundreds of software packages *and* over 30Mb of extras!



Your Cover disk

Once again, MACFORMAT has done the business! Whether you want to strafe your way through *Syndicate's* gangland or eliminate the latest wave of viruses – the MACFORMAT cover disk is all the ammunition you'll ever need.

Your monthly treats

Want to know what's lurking on this month's MACFORMAT cover disk? Well, read on, MacDuff, read on...

- ***Syndicate* demo** – an *exclusive* MACFORMAT special mission! Now you can be as vicious as Big Vern as you wipe out your underworld enemies with this gangland blaster. See page 86 for the full review.
- ***Disinfectant 3.41*** – keep it clean: immunise your Mac against the all the latest viruses, like the recently discovered *SysX*.
- ***Schuzzy*** – keep an eye on the activities of both your internal and external SCSI devices
- ***UpWord*** – a compact but highly useful shareware word processor.
- ***IconBOSS*** – create or customise your icons to give your Mac that personal touch.
- ***Menuette*** – another personality package. This one enables you to replace the menu bar text with your choice of icons.
- ***Fade Me*** – fade your screen during shutdown and booting-up. Nifty!
- ***Drop Shadow*** plug-in – the *Photoshop* plug-in that enables you to drop soft shadows under the objects in your documents.
- ***Abracadabra*** – helps childproof your Mac by hiding the System Folder.
- ***Guitar Tuner*** – key in to get in key. This shareware will help you tune your guitar.
- ***Last Bootup*** – is someone else using your Mac? This Startup Item will help you find out.
- ***PICTureIt*** – got *HyperCard*? Then this'll enable you to display colour or mono PICTs in their own windows. See page 62 for more *Hypercard* biz.

START HERE

MACFORMAT's cover disk is a high-density floppy, so it can bring you more for your money. Almost all Macs made in the last four years (anything since the SE/30, including Classics and Performas) have a 'SuperDrive' which can read high-density disks, but older models don't and can't (that's Pluses, old SEs and original Mac IIs).

More than 2Mb of data

We spend hours checking all the programs on the MACFORMAT cover disk with as many different machines as possible, but we can't check every combination and we can't guarantee that the programs will work with your system. The information on compatibility in these pages is intended as a guide only, and we can't warrant the programs or be in any way responsible for any problems arising from their use or inability to use them. Check the 'Get Going' box just to the right for guidelines on installing any software.

Of course, some disks are occasionally damaged during the copying process. If you suspect yours is one of these, then please refer to the 'Faulty Disk' box on page 8.

BACK IT UP

Before you do anything else, you should make a backup of the MACFORMAT cover disk and work only with the backup, just in case anything goes wrong. Make sure the original cover disk is write-protected (move the tab so that you can see through the hole) – now nothing can be written to the disk. Then follow these simple steps:

1. Insert the MACFORMAT cover disk.
2. Highlight the disk icon (but don't double-click on it) and drag it over your hard disk's icon. The contents of the cover disk will be copied into a new folder on your hard disk called 'MACFORMAT June cover disk' (but not decompressed, so you still can't run anything directly).
3. When the copying finishes, drag the cover disk icon into the Wastebasket to eject it.
4. Insert a blank high-density disk. Check it's not write-protected, and, if need be, format it, naming it 'MACFORMAT June backup'.
5. Drag the 'MACFORMAT June cover disk' folder from your hard disk on to the new floppy disk's icon. When it has finished copying, your backup is complete.
6. You can now delete the 'MACFORMAT June cover disk' folder from your hard disk by dragging it to the Wastebasket.

GET GOING

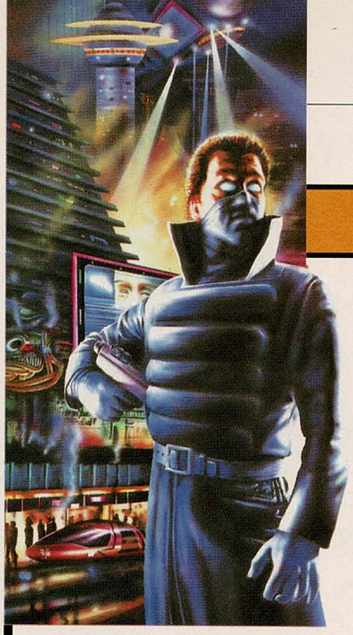
Before you install any new software on your Mac you should ensure that you have a full backup of your hard disk, in case anything goes wrong, and that applies equally to our cover disk. Once you have backed up your hard disk, make sure you have no applications running, only the Finder, and insert the cover disk in your floppy drive.

Double-click on the disk's icon to open it; there will be two files. ReadMe contains information about the programs on the disk – double-click on it to read it. The other icon is the compressed file containing the cover disk programs.

We compress the programs into a single file so we can fit more on the disk, but before you can use them you must decompress the files. Double-click on the icon, and a dialogue box will appear which looks similar to the normal **Save** dialogue. Select the place on your hard disk where you want the expanded programs to reside, and click **Save**. After a few moments, the software will be installed on to your hard disk. You do not need to copy the files on the disk on to your hard disk before doing this.

Some programs may need further installation; check the ReadMe files which come with the programs for details.

EXCLUSIVE! SYNDICATE DEMO



Shareware fee: none
Compatibility
Mac: any
System: 6.07 or better
Display: 256-colours/16 greys

Welcome to the world of the syndicate. Governments no longer control the world, having long ago ceded power to huge corporations. If anyone steps out of line, well, they soon find out just how uncompromising modern business can be.

You play an executive from one of the smaller syndicates, and you must 'persuade' three journalists to join your side using four remote-controlled cyborgs.

The game is viewed from overhead. To move your cyborgs you simply click on a location on the main screen or on the scanner. To make all your agents move at once, click on the asterisk bar between the large 1 and 2, and 3 and 4 icons. From now on they move as one unit. To turn it off, simply click on it again.

The large number icons represent each of your agents. The white bar shows how much energy each has – if it drops to the bottom, your cyborg is dead. The three bars beneath each of the energy bars enable you to alter each cyborg's behaviour. The top one is adrenaline (which makes the agents move faster), next is perception (which increases their awareness) and the third is intelligence. To increase the levels, simply click on the right-hand portion of the bar. If, for instance, you want your droids to look after themselves, then boost the levels of all three bars.

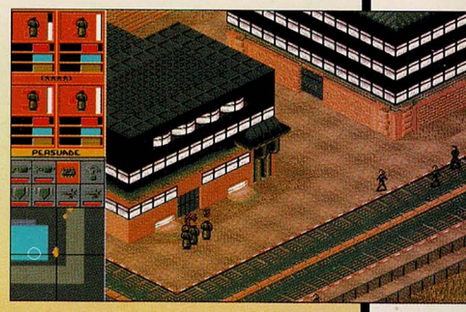
Beneath the agent icons are your weapons. In this demo, each has the same weaponry. The first two are mini-guns – very powerful and enormously deadly machine guns. Next up is the Persuadatron (more on this in a minute), then there's a time bomb. On the bottom row are two energy shields which will protect you from virtually every attack and finally two lasers.

These are the weapons which will be at your disposal during the mission. The icons at the bottom left are energy shields.

To use any of the weapons, simply click on the appropriate icon. To shoot someone, move the pointer over the target, hold down the [command] key and click the mouse button.

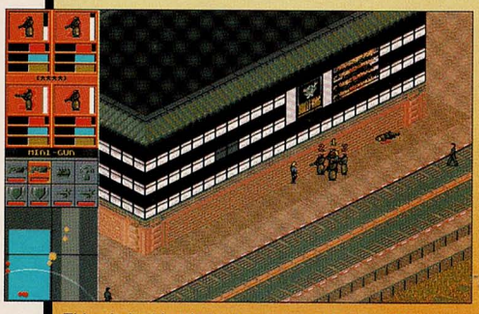
To persuade the three enemy agents to join you, you need to use the Persuadatron. This is the chip-like icon in the weapons bar. Click on this and anyone you pass (you have to be pretty close to them) will flash blue and then start following you around. Unfortunately, you have to protect the newly acquired agent, because if any of them get shot, you'll fail in your mission.

The game starts in the north of the city zone. If you look at the scanner in the bottom left of the screen, you should see a radar blip coming from a point south east of your location. Follow the blip and you'll find your first target. It's best to keep all your agents' behavioural bars topped up as you travel around. Oh, and keep a laser selected just in case. Once you find a building where a journalist is hiding, switch to Persuadatron and enter the building by clicking on the door. The small white blip on the scanner will change into a blue blip. They've been persuaded to join you and you can move on.



This building is contains the first of the three journalists which you've got to persuade. Watch out for all those enemy agents.

If you end up backed into a corner, hold down the [control] key and click the mouse. Your agents will go into panic mode and blow hell out of everything. If things are really bad though, hit [command] D to self-destruct.



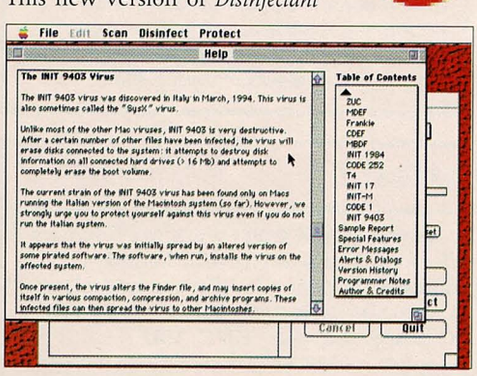
This pitched battle is about to get bloodier. Those red blobs on the left of the scanner are the enemy.

Disinfectant 3.41

Shareware fee: none
Compatibility
Mac: any
System: any
Display: any

This new version of *Disinfectant* protects your Mac against a virus discovered in March called *SysX* or *INIT9403*, which – rarely for a Macintosh virus – is extremely destructive and will delete all the files on your hard disk.

Of course *Disinfectant 3.41* also protects you against all other known viruses. It's an essential! Run the program to install an Extension that automatically scans any disk you install.

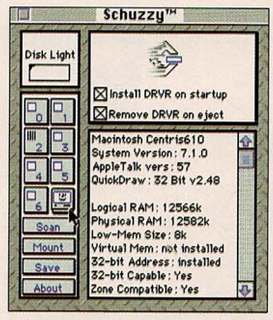


Read all about it: the horrific details of the new virus. Don't get caught! *Disinfectant* will catch and kill all known viruses.

Schuzzy

Shareware fee: jewellery or gifts!
Compatibility
Mac: any
System: any
Display: any

Schuzzy is a control panel which tells about the peripherals you have attached to your SCSI (pronounced scuzzy, hence the name) port, including any inside the Mac's case. It's useful for prompting removable hard drives or CD-ROMs to mount up, and lets you put an icon in the menu bar to show disk access.



Schuzzy lets you peek inside your SCSI bus – hours of fun!

Last Bootup

Shareware fee: none
Compatibility
Mac: any
System: 7
Display: any

Suspicious that someone's playing with your Mac? Drop *Last Bootup* in your Startup Items folder in the System folder and every time you

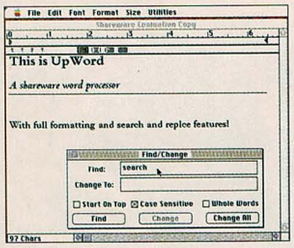
switch the Mac on it will tell you the last time it was activated. It's not foolproof, but if you're feeling paranoid it can help prove you right.

UpWord

Shareware fee: $35
Compatibility
Macintosh: any
System: any
Display: any

Sometimes you just don't need Microsoft *Word*, but *TeachText* is too limited. Enter *UpWord*. *UpWord* is a word processor which gives you full formatting control, with tabs, rules, search and replace, and full control of fonts.

It is ideal for knocking out quick notes, and as it requires only 342K of memory, you can run it simultaneously with most other programs. *UpWord* is genuinely useful – if it had a spelling checker you wouldn't need any other word processor 90% of the time.



UpWord: a small but perfectly formed word processor.

Menuette

Shareware fee: $15
Compatibility
Macintosh: any
System: 7
Display: 256 colours

Menuette converts the text in your menu bar into cute little icons, which you can edit. This tidies things up a little, but it's really for people who like to customise their Macs to look unique. And let's face it, who doesn't?

IconBOSS

Shareware fee: $25
Compatibility
Mac: any
System: 7
Display: 256 colours

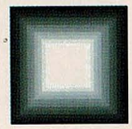
IconBOSS is a handy utility for editing icons or creating them from scratch. Simply drag an icon on top of the *IconBOSS* program and it displays a paint window with the usual paint program controls.

If you create any particularly cool icons with *IconBOSS*, send them in – we'll include the best on a future MACFORMAT cover disk.

Now you can cheer up your desktop by creating new icons for your programs and files.

File, Edit, etc rendered into icons for that truly graphical look.

Fade Me



Shareware fee: none
Compatibility
Mac: any
System: any
Display: colour

This Extension slowly fades your screen to black on shut-down, then fades it back in on start-up. If you have a Mac with a manual power off switch, you won't be able to see the 'It's now safe...' message, but don't worry, it is. Just drop the Extension in your System folder to activate it.

Abracadabra

Shareware fee: $7
Compatibility
Mac: Any
System: Any
Display: Any

Abracadabra makes the System folder invisible, preventing tampering by little hands. To make the System folder reappear, simply run *Abracadabra* again.

Guitar Tuner

Shareware fee: $12
Compatibility
Mac: any with microphone
System: any
Display: any

Guitar Tuner is a lifesaver if, like me, you find tuning a guitar next to impossible. Simply play an open string note into the Mac's microphone and adjust the pitch until the line on the *Guitar Tuner's* display indicates the correct note.

An end to out of tune strumming, thanks to *Guitar Tuner*.

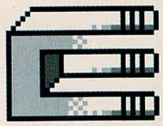
PICTureIt

Shareware fee: none
Compatibility
Mac: any
System: any with *HyperCard*
Display: any

This stack enables you to display a colour or mono PICT in its own window using *HyperTalk's* 'Picture' command.

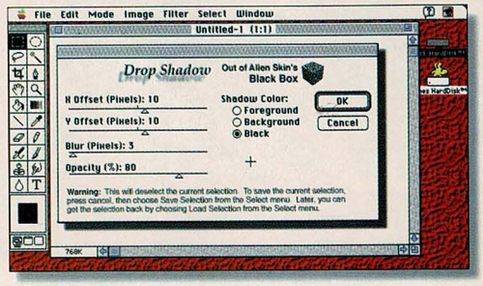
Click on the 'Add picture' button to select the pictures you want to display and they'll appear in a scrolling window. Just click the 'View picture' button, and you'll go straight to it. To discover how it all works, check the scripts – and see page 62.

Drop Shadow plug-in



Shareware fee: none
Compatibility
Mac: Any with *Photoshop*
System: Any
Display: Any

This *Photoshop* plug-in enables you to easily create 'proper' soft drop shadows in *Photoshop*. Just select the object to be shadowed and choose the plug-in from the Filters menu. Adjust the offset and transparency, *et voilá*.


File Edit Mode Image Filter Select Window
Untitled-1 (1:1)
Drop Shadow
Out of Alien Skin's Black Box
H Offset (Pixels): 10
V Offset (Pixels): 10
Blur (Pixels): 3
Opacity (%): 80
Shadow Color:
Foreground
Background
Black
OK
Cancel
Warning: This will deselect the current selection. To save the current selection, press cancel, then choose Save Selection from the Select menu. Later, you can get the selection back by choosing Load Selection from the Select menu.

Here's a picture with a drop shadow showing a drop shadow being put on a picture with a... erm, see for yourself!

ABOUT SHAREWARE

Some of the software on the MACFORMAT disk is shareware. If after a fair trial period you decide to carry on using it, you are obliged to pay the fee specified in the program's documentation files.

FAULTY DISK?

When you duplicate as many thousands of disks as MACFORMAT does each month, unfortunately a few duds are bound to slip through the net. If you think you have one such lemon, read through the installation procedure on page 6 just to double-check that you're not missing something.

If the disk still won't work, we'll replace it for you. Just return it with a sturdy self-addressed envelope (a Jiffy bag is ideal) to: MACFORMAT June Disk, Discopy Labs Ltd, PO Box 21, Daventry NN11 5BU. Telephone: 0327 300077. Please do not send your disk to any other address.

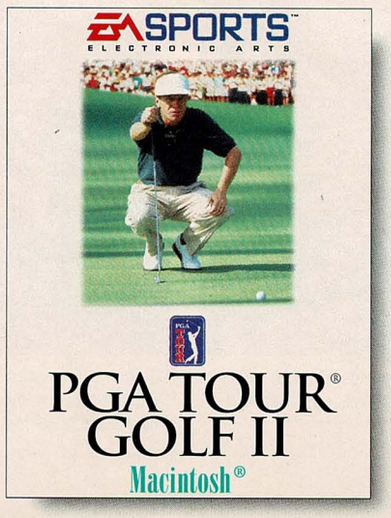
7 Courses and a choice of greens

PGA TOUR® Golf II, served up on the Macintosh with a feast of new features. In addition to Practice and Tournament modes, there's now a Skins Challenge on the menu, bringing you all the tension of high-stakes golf for cash. And that's just for starters!

The 7 main courses are the most challenging the American Tour has to offer, each one identical in every way to the real thing – even down to the wildlife. Select a club, compensate for the wind gusting up to 20mph, draw or fade your drive around obstacles. But miss the Accuracy Point, and landing in a Sahara-sized bunker could be your just desserts.

You'll eat up these greens. Every ridge and contour has been modelled after its PGA TOUR® counterpart. And when winning the championship, taking 4 Skins, or simply making the cut depends on a 16 foot putt, you can bet that the tension will reach boiling point.

PGA TOUR® Golf II – finish all these courses, and you'll *still* be gagging for second helpings.



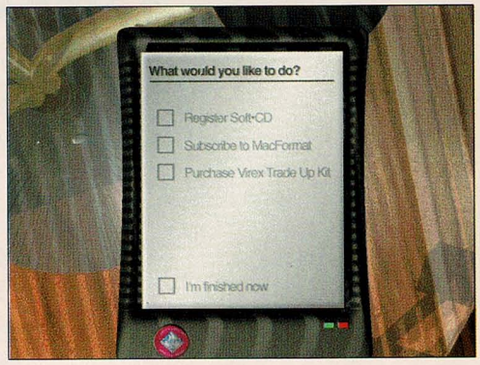
if it's in the GAME, it's in the GAME™

EA DIRECT

PGA TOUR® Golf II is also available from EA Direct on 0753 549 442 or write to Electronic Arts, 90 Heron Drive, Langley, Slough, Berks SL3 8XP • PGA TOUR, TPC, Tournament Players Club and the Players Championship are registered trademarks of PGA TOUR, Inc, and are used by permission • Mac and Machintosh are registered trademarks of Apple Computers, Inc. • EA SPORTS, the EA SPORTS logo, 4 Way Play, the 4 Way Play logo and "IF IT'S IN THE GAME, IT'S IN THE GAME" are all trademarks of Electronic Arts

EA SPORTS™ ELECTRONIC ARTS

Introducing your CD-ROM



Subscribing to MACFORMAT is as easy as clicking that button there. Go on, you know it makes sense...

Has your copy of MACFORMAT got a CD-ROM with it? If so, here's what's on it; if not, rush back to the shop and get one! Go on, you know it makes sense.

ON THE DISC...

As well as all the CD goodies explained here, the MACFORMAT CD-ROM includes the entire contents of the HD disk of the normal edition – except they are not compressed, because there is no need!

We recommend you copy the programs to your hard drive before using them, however, as the speed constraints of the CD disk make them a little cumbersome otherwise (see pages 6-8 for details).

To speed up *SoftCD*, try copying the *SoftCD* folder to your hard disk, and running it from the icon inside it. This will make things move a bit quicker!

This month sees the introduction of the regular, monthly CD-ROM covermount. That's right, every month from now on, a limited number of copies of MACFORMAT will include a CD-ROM, as opposed to the usual HD disk. Our reader surveys have revealed that a significant proportion of you already own a CD drive, so we thought we'd give you the option of choosing your preferred software format.

If you're lucky enough to have one of these precious, limited edition, director's cut (hang on, that's not right) copies of the mag, then read on to discover what files are filling the hundreds of extra megabytes which you now own.

If, on the other hand, you're a CD-ROM owner who's reading this in an HD disk edition of the magazine, you may like to know you can find CD-ROM copies in large, high street newsagents. If you'd like to ensure you get the CD-ROM version delivered direct to your door every month, though, then why not become a MACFORMAT subscriber? (See page 98 for more details.)

The main program on this month's CD-ROM is a sneak preview of Softline's *SoftCD* project. Softline is attempting to use the CD-ROM to create a virtual environment, where you can discover more about hundreds of software products. Through the medium of compact disk, you can read about the software, see videos of it in action, try interactive demos and even study how to use the package itself.

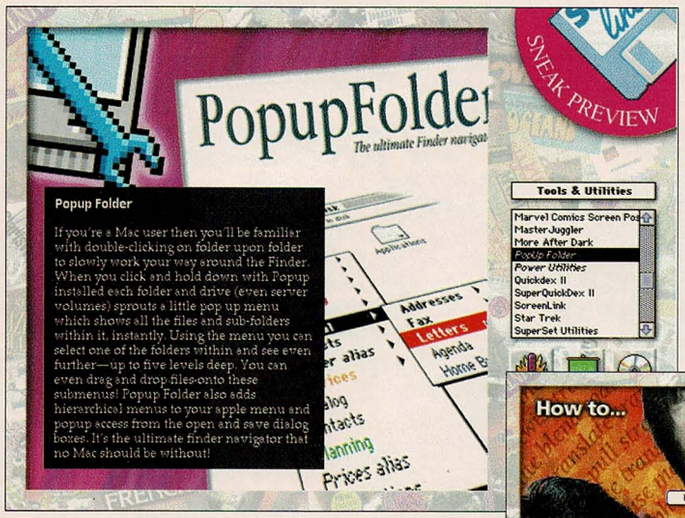
SoftCD uses a virtual shopping centre to enable you to explore information, demos and videos of top software

SoftCD uses a virtual shopping centre to enable you to explore this information. At present only two of the shops are occupied – the MACFORMAT office and Softline's store – but new shops will be added over the coming months to provide ultimately a complete software directory.

The *SoftCD* program begins in the corridor leading to the shopping courtyard – visitors to Bath may recognise it as the Seven Dials centre, where MACFORMAT has its real-life offices! From

Visitors to Bath may recognise this as being the courtyard of the Seven Dials building, where MACFORMAT has its palatial offices. Except the building next door isn't really an AppleCentre, more of a restaurant really...

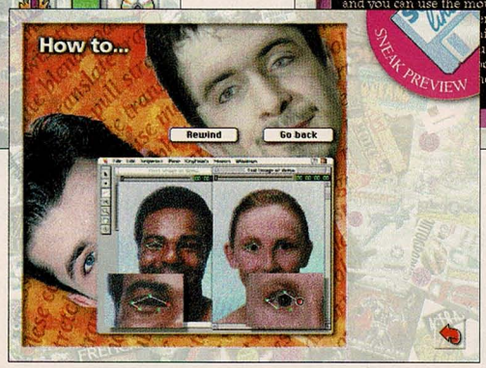
The MACFORMAT office – minus the Macs; the empty boxes left over from when we first moved in; and Arthur the lovable, cuddly rat. Try clicking on the table to explore the software directory and use the tablet to subscribe to the magazine and register the *SoftCD*.


PopupFolder
The ultimate Finder navigat
Popup Folder
If you're a Mac user then you'll be familiar with double-clicking on folder upon folder to slowly work your way around the Finder. When you click and hold down with Popup installed each folder and drive (even server volumes) sprouts a little pop up menu which shows all the files and sub-folders within it, instantly. Using the menu you can select one of the folders within and see even further—up to five levels deep. You can even drag and drop files onto these submenus! Popup Folder also adds hierarchical menus to your apple menu and popup access from the open and save dialog boxes. It's the ultimate finder navigator that no Mac should be without!
Tools & Utilities
Marvel Comics Screen Pos
MasterJuggler
More After Dark
PopUp Folder
Power Utilities
Quickdex II
SuperQuickDex II
ScreenLink
Star Trek
SuperSet Utilities
Addresses
Fax
Letters
Agenda
Prices alias
SNEAK PREVIEW

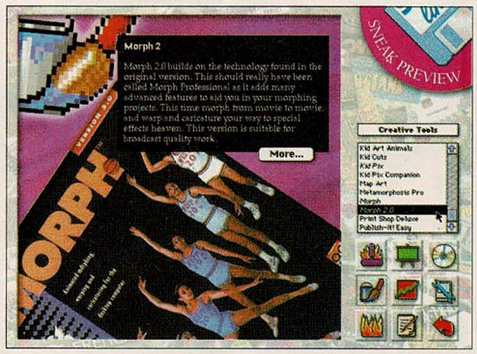
In *SoftCD's* Popup menu you'll find volumes of information about software, all accessible at the click of a mouse button – you don't have to open a single folder.

AESOP'S FABLE
THE TORTOISE AND THE HARE
The Living Books
The Living Books are a series of interactive books on CD. Incredibly easy to use they are guaranteed to keep even the nosiest of children (and adults) quite. Each book is based around the same idea. You have a page of a story which is animated and read out aloud. Once the page has finished the fun really starts and you can use the mouse pointer to interact with the story.
More...
CD ROM
Last Chance to See
Learn French
Learn Spanish
Lifesaver
Arthurs Teacher Trouble
The Tortoise & the Hare
New Kid on the Block
Just Grandma and Me
London
Lovers Guide
SNEAK PREVIEW

Try out demo versions of CD-ROM and floppy products, including Broderbund's 'Living Books' series.



Find out more about key products, such as *Morph*, with these brilliant animated tutorials.



Use the index and icons to find information on dozens of essential products.

this point, you can navigate your way around the virtual environment by simply clicking on the building you wish to visit.

In the MACFORMAT office you'll find the prototype software directory. Here you can search for different kinds of products, use demos, read about the software and watch descriptive videos – it's much simpler to use than it is to explain!

The best thing in the MACFORMAT office, however, is the option which enables you to subscribe to the world's best Mac magazine (that's us, by the way). You can also register the CD; this will entitle you to *SoftCD* updates as and when they are released. And that, as Mr Forsythe is so fond of saying, is all there is to it. So what are you waiting for? Go and explore this virtual shopping environment and get a taste of what the future of home shopping is really about!

Stuart Anderton

The MACFORMAT CD Extras! Over 30Mb of essential shareware

The wonderfully huge capacity of the CD-ROM means that we can now include vast amounts of extra software, which was previously impossible on the HD format. On this disk you'll find over 30Mb of super shareware to explore – over a thousand files in all!

As I'm sure you appreciate, there's far too much on the disk to explain in detail here; it would take the entire magazine. If you explore the contents, however, you'll find hundreds of extras, including games, fonts and utilities. Don't believe me? Well, just take a peek at the following list...

Files on the disk include: *7 for Seven, A-Trap, AboutThatMac, Alias Director 3.5, Banner Maker 1.2.5, Before Dark 1.1, Billy Goes Bowling, BitMapsToEPS v3.10, Blindfold, Brickles Plus v3.0, Calculator II, Calendar 2.5, Catapult, Changeling 1.0, Changeling 2.0, Color Daleks, ColorAlias, Coloring Book 1.1, Compact Pro, Cribbage 2.5, ctc 1.6, Custom Killer, DataShredder, Deflate, DeIcon, Desert Trek, Desktop Deleter, Diamonds, Digital Camera, Disinfectant 3.3, Disk Charmer, DiskDup+, Display All Docs, DTPrinter, EPSI to EPS Converter, EyeClock, FastLabel 3.0.5sw, File Commander 1.0, Find Printers v1.1, Folder of PICT / BMP, Forty Thieves 2.1, Fractal! 1.2, Fractal! manual v1.2, Gatekeeper Application, GetInfo, GIFConverter 2.2.10, Glypha II 1.1, Group Launch Menu, HeartQuest 0.8, IconClock, IconClock, It's Just a Clock, JPEGView, JustPrint, Level Mover, LightningPaint 1.1, LockSmith, MacColorBars 1.1, Mandella, Memory Mapper, Mouse Odometer 1.0, MyDude 1.0, Name Stripper, No Vowels II, Obliterate, Oxyd™ 16 colors, Oxyd™ monochrome, Peek-a-Boo, Pesticide, PICT / BMP, PowerAdd, PowerLaunch Lite, QT Movie ToolBox, QuicKeys Menu, Right On Time, ROT Utilities, Sample Editor, Scale, SCSI Startup, SetInfo, Site-to-Site, SndConverter Pro 2.1, SndConverter Pro 2.2, Sokoban 1.1.1, Solarian II 1.04, Sound Menu, Sound Mover 1.76, Sound RoundUp, SoundStudio Light 1.3.5, Speedometer 3.23, SpoydWorks Solitaire 1.2.1, ST PerfMonitor, Stapler 1.1, StartWabbit, Stationer, StudioCraft™, StuffIt Expander™, StuffIt Lite™, Switch-To-Finder, System 7 Pack! 3.5, TestDcmd, Tetris Max 2.2, TEXT Converter, TextBreak, TextMerge, TheBar, TrashMan Emptier, UpWord™ v1.2, Vegas Poker (Color), World Time, Yes Vowels II, ZoneRanger 0.9.5 ß, Zork, ZTerm 0.9, NewBold TT, Aarcover, AmericanUncial, Aneirin, Ariosto, Attic, Beatsville, BlackChancery Type1, BuccaneerT1, Columba, Crillee, DotMatrix, EraserDust, Franks.suit, Futhark, GenoaItalic Type1, GenoaItalic, GenoaRoman, Gessele-Script, Gravicon-Display, HarringtonType1, HelvFracs, InformalOblique, InternationalTy1, Juliet, Kelmscott, Kennon, Kramer, Lassus, LED, Logger, Luxembourg, Maginot, Marydale, Milano True Type, NeedlePointSew, NewRixFancy, Octavian, Phaedrus Italic (TT), Phonetic-Alphabet, Premium Fonts, Publius, RansomNote, Rhyolite Fonts, Rothman™, SansFractions, Sharktooth, Shelldon Type 1, SnyderSpeed, Spooky, TimesFractions, Treefrog.suit, UltraBlack, Visage, Wiltonian, PC PaintBrush (PCX) – XTND, StartUp Screen – XTND, Windows (.BMP) – XTND, Gatekeeper, FlashBeep 1.0, Get More Info, Gravity Mouse 1.0, ICONOpen!, Mouse Odometer INIT, NetBunny 2 1/2, PowerLock, StartupSndInit 1.4, WindowStacker, Zoomin', PostCard, Print to Paint, Print to PICS, Print2Pict, BroadCast, Public Folder 1.0, GIFConverter 2.2 Doc, Papyrus 1.0, BMP, dBase II & III to CSV, EPSF (IBMpc to Mac), WordStar to RTF, Captain Dingbat, GenoaItalic, Remote Shutdown, TappyType v1.3, Basic Black, BeHierarchic, CustoFinder 7, DragAnyWindow, Gatekeeper Controls, Gatekeeper Privilege Mover, Helium, IBeep2 2.31, It's Your Default!, MenuBall, MountAlias, Okey Dokey, PwrSwitcher, RamDisk+ 3.22, Sav-O-Matic, Schuzzy™, Shutdown Delay, SndControl 2.1.1, SoftwareFPU, SuperClock!, TrashMan, Volume Menu 1.0, Zap!, MacsBug, Desk Invaders* and many more!

This is... computer warehouse

"When all said and done you just can't beat a CW deal!"

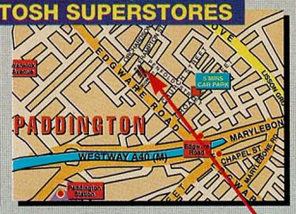
"Why pay more in '94? - Dial **071 724 4104**"

Authorised Education Reseller
Authorised Apple Workgroup Server Reseller
Certified Digital Audio Editing Systems Specialists

Authorised Reseller

TWO GREAT MACINTOSH SUPERSTORES

COMPUTER WAREHOUSE 2



COMPUTER WAREHOUSE 1

The Great Value Macintosh Superstores!

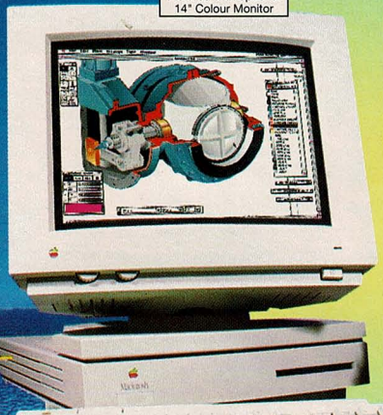
MACINTOSH LCIII

CW PRODUCT CHECKLIST

- ☐ 25Mhz 68030
- ☐ 4Mb RAM Exp to 36Mb
- ☐ 80Mb Hard Drive
- ☐ LC expansion slot
- ☐ Includes Keyboard

Ideal for:
- General business tasks
- Home office chores
- Music
- Games and fun

Pictured with optional 14" Colour Monitor



MACINTOSH LCIII

AN EXCELLENT CW SPEEDY COLOUR MACINTOSH FOR LESS THAN £500!!

A real CW favourite, the LCIII features a zippy Motorola 68030 processor clocked at 25Mhz which makes it the ideal machine for general business, education and home entertainment tasks. In a major coup CW has managed to secure LIMITED QUANTITIES of the excellent Macintosh at a new super-low price. Hurry they won't last long at these savings.

- Speedy 25Mhz 68030 - as fast as a Macintosh IIci!
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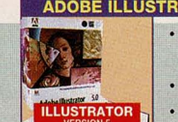

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- ☐ 160Mb Hard Drive
- ☐ PDS expansion slot
- ☐ The speed of a Quadra

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- Fast 25Mhz Motorola 68040
- Built-in 3210 55Mhz Digital Signal Processor (DSP)
- Built-in Math co-processor
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On-Board 55Mhz DSP means:
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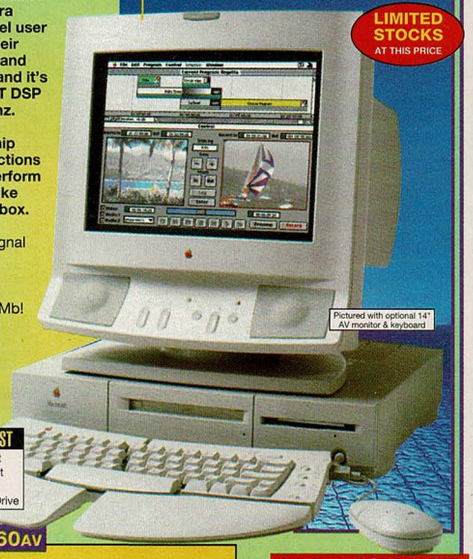

COMPUTER WAREHOUSE PRODUCT CHECKLIST
- ☐ 25Mhz 68040
- ☐ On-board DSP chip
- ☐ CD-ROM drive fitted
- ☐ 8Mb RAM fitted
- ☐ 1 x Expansion slot
- ☐ On-board Ethernet
- ☐ Monitor support
- ☐ Optional 500Mb Drive

Macintosh 660AV

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NEW! PRODUCT

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- Apple Fontpack
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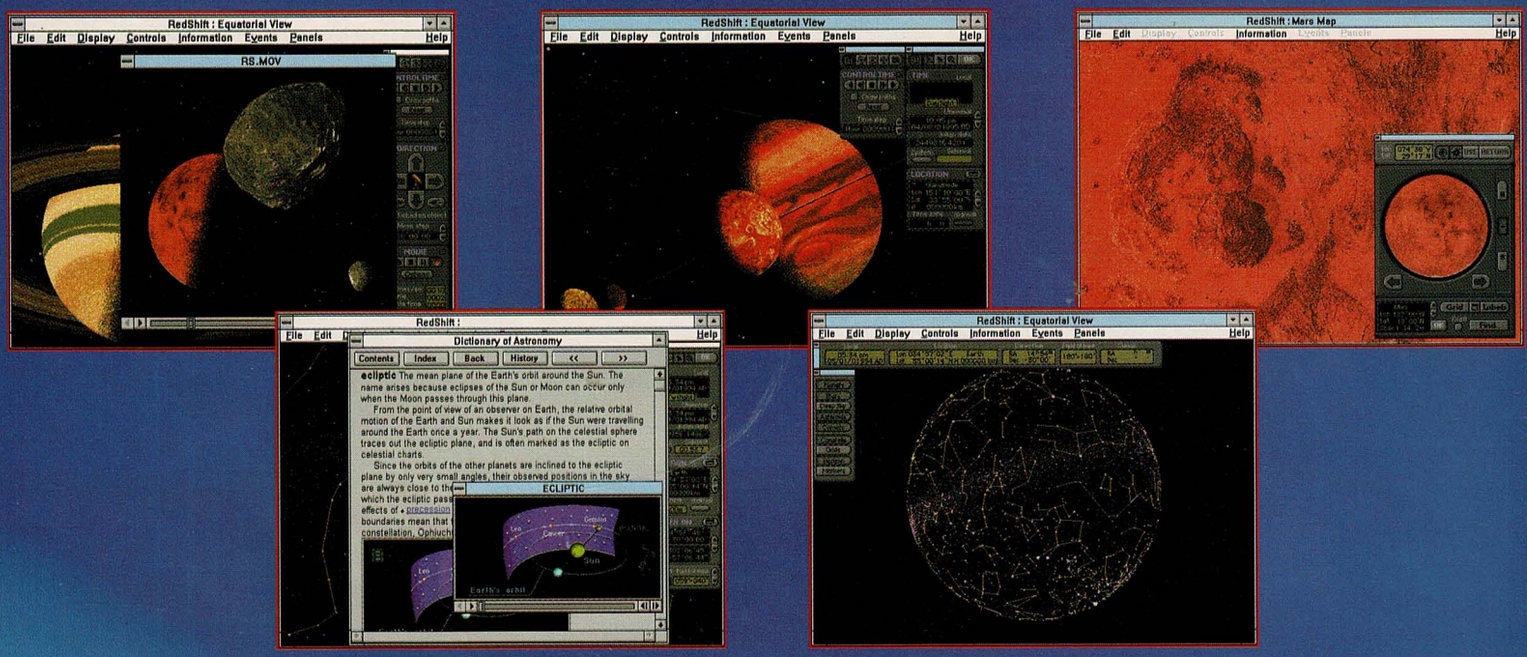
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ecliptic The mean plane of the Earth's orbit around the Sun. The name arises because eclipses of the Sun or Moon can occur only when the Moon passes through this plane.
From the point of view of an observer on Earth, the relative orbital motion of the Earth and Sun makes it look as if the Sun were travelling around the Earth once a year. The Sun's path on the celestial sphere traces out the ecliptic plane, and is often marked as the ecliptic on celestial charts.
Since the orbits of the other planets are inclined to the ecliptic plane by only very small angles, their observed positions in the sky are always close to th
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QuickTime

Cheap multimedia Macintosh on the way

With the launch, this autumn, of a new cut-price audio-visual Mac, the current best buy, the 660AV, could be discontinued. Watch out for low prices in the coming months as dealers begin to off-load static stock.

Yes, it's true. This August, Apple are planning to launch a low-cost Quadra with full audio-visual capabilities. The as-yet unnamed machine includes 4Mb of RAM, a 250Mb hard drive, CD–ROM drive, 14-inch colour monitor and keyboard as standard, and will, amazingly, retail for less than $1,500 (£1,000) when it is released in the States later this year. With a 33 MHz 68LC040 processor at its heart, the new AV will initially be offered in a Quadra 610-style casing, but later models will include LC and Performa-style versions.

The key to the stunningly low price point, which is effectively half that of the current entry-level AV Mac – the Quadra 660AV – is the machine's modular design. This will incorporate not just the PDS slot introduced in recent Macs, but also three 'direct connect slots' (DCS). These will enable users to buy in additional features, as and when they're required.

The DCSs will be configured for a variety of expansion functions: a communications slot for either Ethernet, token-ring or modem cards will sit alongside another one supplying audio-visual functions. Cards occupying this slot will cost less than $250 (£170) and provide quarter-screen video capture and display facilities.

The third slot is designed for Mac TV – a TV tuner which Apple is hoping to sell for less than $200 (£150). This setup will enable you to receive sound and pictures directly. To further compliment this feature, the new Macintosh will also include a front-mounted, infra-red receiver. This will initially be configured for remote control, but will eventually be upgraded to act as a transceiver for two-way communications with Apple's Newton range and forthcoming infra-red PowerBooks.

In a further bid to reduce costs, the new Mac will use an IDE hard drive interface. This approach has proved a popular alternative to SCSI on the PC, but it's the first time Apple has incorporated it into one of its machines. A SCSI port will, however, be retained for hooking up external devices. In addition, the machine will also include the usual ADB port and 8-bit stereo sound. The modular unit will also offer upgrade paths to the next generation of low-cost PowerPC 603 logic boards.

Whether this heralds the demise of the Quadra 610 and 660AV, only time can tell, but it certainly means that low-cost multimedia is waiting in the wings at break-through prices.

3D graphics breakthrough

Criterion Software has released a fully-featured, 3D graphics rendering package for the Mac, which makes £100,000 workstations redundant. The *RenderWare* package – which can generate 40,000 polygons a second on an non-accelerated 68030 based Mac, or a stunning 150,000 polygons per second on a PowerMac – should result in better Mac games at cheaper prices.

While *RenderWare* will be of principle interest to games producers, it will also find favour in multimedia, CAD and virtual reality fields. Don't count on getting it at home though, not unless you've got a cool £10,000 sitting in your back pocket, that is.

The first games company to use *RenderWare* is Virgin Interactive with its multimedia exploration game, Hex.

Are these the kind of glossy graphics we'll be seeing on tomorrow's Mac games?

Novell buy WordPerfect and Quattro

According to our sources, the leading publisher of network software, Novell, has just bought WordPerfect Corporation in a deal reputed to be worth a cool $1.4 billion. The good news is that the merger won't affect WordPerfect's range of software, its warranties or continuing development.

The purchase comes just a week after its merger with Adobe Systems and Aldus Corp, and means that Novell is now the second largest software company in the world – after giant Microsoft.

The acquisition is in response to Microsoft's domination of both the Apple and PC markets, where it currently holds 75% of the word processing and 90% of the spreadsheet sectors. This has got to be good news for Mac users, because prices are sure to fall as the two giants battle it out.

Syquest's storming storage solution

The latest addition to Syquest's family of removable hard cartridge drives, the SQ3270S, is a 3.5 inch unit which reads and writes to a 270Mb cartridge. Priced at a competitive £435, the SQ3270S is alleged to be up to three times faster than optical disk drives and, with its 13.5 millisecond seek time, it's the fastest removable device on the market.

It can also read and write to 105Mb cartridges and the 270Mb versions are expected to cost less than £100. Pricing is clearly an important issue; Syquest has recently been forced to cut the prices of its 44Mb and 88Mb devices to under £250 in a bid to fend off increasing optical drive-based competition. By offering increased capacity and cost-effective performance levels, the company is obviously hoping to gain a larger share of the multimedia market. For more information call 071 222 8515.

Syquest's new 270Mb drive offers a cost-effective solution to future storage needs.

Publishing for peanuts

If you're put off by the price of leading DTP packages like *Aldus PageMaker* and *QuarkXPress* – some £816 and £934 respectively – Aldus's *Home Publisher*, at a mere £82, might just resuscitate your interest. With over 50 ready-made templates, a spell-checker with 100,000 words, a 660,000 synonym thesaurus, 100 clip art images and 12 fonts, *Home Publisher* certainly appears to contain everything the budding desktop publisher requires.

Capable of supporting multi-column layouts and imported graphics, the package employs a 'question and answer' format to meet all your design needs. Once you've imported some text and graphics into a blank document, *Home Publisher* asks you to choose what kind of publication you wish to produce, and then suggests an appropriate template. These built-in, layout grids include: brochures, newsletters, flyers, labels, business cards and calendars.

MACFORMAT will be giving *Home Publisher* the full review treatment in the very near future, but in the meantime you can contact its distributors, Iona Software, on: 081 241 8925 for more details.

Tomorrow's Finder revealed

The Mac may have the friendliest face in computing, but if Taligent (a research and development company set up by Apple and IBM in 1991) have their way, the Mac will be kitted out with a radically different Finder by the end of 1995. News of the Mac's impending face-lift came to light this month in Cupertino, California, where Taligent showcased the prototype of its new, graphical user interface – known as People, Places and Things.

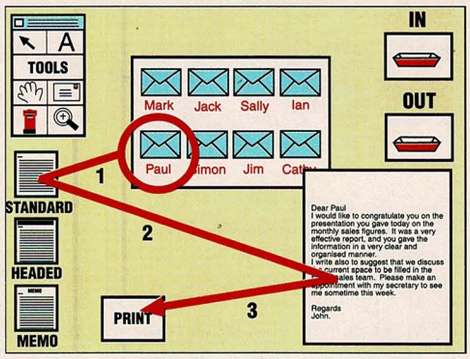
Taligent's new interface promises to be even simpler to use than the Mac's previous Finder software. Based on a task-centred approach to computing, the desktop will feature icons representing template and 'stationery' documents; icons for input, output and storage devices; and windows containing cards of your contacts and clients.

Loading and printing a letter will be a simple case of dropping the addressee's card onto the relevant stationery icon, typing your correspondence into the pre-set layout, then dragging the resulting document on to your printer icon. It's the same sort of thing with e-mail: the document is just dropped on to your modem icon. Whereas in a networking environment, communication with other users will involve dragging and dropping documents on to the desktop's In and Out boxes.

Taligent are clearly keen to promote the friendliness of these operations, hence the name People Places and Things, but perhaps the most innovative aspect of their proposed interface is its new Tools component. The Tools, which sit on the desktop as collection of icons, alter depending upon the task the user wishes to perform; offering editing and modification facilities as required.

Applications will be replaced by blank templates which you can modify as you need them. And because most functions will already be built into the Mac's operating system, additional applications will be smaller, faster and cheaper.

In order to bring these innovations to the market and incorporate them into future operating systems, Taligent will, later this year, ship its Application Environment and Development System to developers working on the PowerPC, IBM OS/2 and Unix platforms. Meanwhile, you can expect to see selected elements of People Places and Things on future upgrades of System 7.



An idiot-proof interface? We'll let you know you just as soon as we get our arms out of these strange new jackets.

State-of-the-art screen

Apple's new Multiple Scan 20 display must surely take the award for the ultimate Mac monitor. The 20-inch screen is capable of displaying an A3 document at full size, and its resolution can be switched according to the material it's displaying without restarting your Mac. It also offers fine pixel editing at resolutions up to 1280 x 1024.

Compatible with IBM PC clones, the display also includes support for Apple's ColorSync extension to give better colour calibration. The Scan 20 is also capable of being driven by Apple's own display card, the 24AC, to give full 24-bit colour and high-speed *QuickDraw* acceleration. The estimated street price is £1,550, but for more information call Apple on: 0800 127753.

Now, this we like! No you don't understand – we *really* like it!

Even more instant

Instant Access has just released its third try-before-you-buy CD, which features locked versions of over 230 applications, games and utilities. *Compendium CD-3*, which costs £9.95, contains 100 new products, including PD programs as well as demos of popular Mac titles; the most notable being ten Claris applications.

ClarisImpact, *Clarisworks* and *MacWrite Pro* join other new business, educational and entertainment titles. It even has expanded books, graphics and DTP releases. If you do find a program which you simply can't live without (or ten of the little blighters for that matter) all you have to do is phone IA with your credit card details and the code to unlock the program will be given to you over the phone. You can then simply copy it on to your hard disk.

Instant Access's *Compendium CD3* is an ideal buy for the Mac browser.

Because the products are bereft of packaging, you can look forward to significant savings, too. *RAM Doubler* for just £44.95; a *Morph and Dynamic Effects* bundle for £149.95; and *Now Contact* and *Now Up To Date* for £89.95, to name but a few. For more information call Instant Access on: 081 205 2596.

Apple Bytes

Massive monitor

Mitsubishi have just announced a high performance 29-inch monitor (try fitting that on top of your PowerBook) called the DiamondPro 29. Created especially for computer aided design, presentation and training, the monitor is microprocessor controlled and flicker free. It can accept input from all Macintoshes as well as S-VHS, NTSC, M-NTSC, PAL, and SECAM. If you have £4,495 to hand (and let's face it, who hasn't?), call Mitsubishi on: 0707 276100.

Trace your ancestors

Family Tree,is a new genealogical program. It places no restrictions on the number of entries, will go back as many generations as you require and can cope with any number of marriages (Liz Taylor's already put her order in). The program will work on any Mac, and costs just £5 (plus P & P). For more details contact Mike Ainscough on 0273 493856.

Coming Attractions

Virgin Interactive have been busy signing up a pile of Mac games to boost their portfolio. First, is Trilobyte's *7th Guest*. This multimedia game features fully rendered graphics and impressive video overlays, and not surprisingly, received rave reviews in the PC press last year. The game is now available on the Mac for £44.99. Its sequel, *11th Hour*, another mystery epic, is scheduled to be released on the Mac at the end of July, you don't need to wait that long, though, because we'll have the full, exclusive preview in next month's issue. Dare you miss it?

Design conference

Designers among MACFORMAT's 27,000 readers will be pleased to hear of a major design conference being organised by Aldus and Monotype. Windows On American Design will be held on Wednesday June 1st at the University of London in Russell Square. The conference will showcase the work of the States' leading graphic designers, including David Carson, Barry Deck, Dan Friedman, Syvia Woodward and Lucille Tenazas.

With over 1,000 attendees, the promoters are expecting this to be Europe's largest design conference this year. Registration costs £45 for professionals and £17.50 for students. For more information fax the Typographic Circle on 071 388 2296.

APPLE BYTES

Going on-line

There's a new bulletin board now operating in London. Portland (which is the board's name, in case you hadn't guessed) features Internet and Usenet e-mail. It also has two CD-ROMs on-line, three phone-lines operating at all speeds up to v32bis (including v42bis) and over 250 different conferences. If you'd like to check the board out, you can modem Portland on 081 241 2639.

Telefinder Pro

Telefinder Pro – the program we got all hot and excited about last month – has now been released as a shareware program. The program offers a remote access host mode; full support for 200 different modems (including high speed models); 32-bit ZModem and XModem transfer protocols; a 250 number dialling directory; a 30 command macro language; built-in GIF and PICT graphic viewers; a built-in mail outbox and balloon help. If you'd like to get your hands on this brilliant piece of software – or would just like to know what the hell it all means – dial the AM Micro Distribution BBS on 0392 493651.

New comm forum

CompuServe has expanded its UK service by launching a new dedicated forum for British comms users. The UK Communications Forum covers Internet, modems, comms software, networking and telecommunications/telephones. Psion, Dacom, US Robotics and Pace have already started their own libraries in the forum, so what are you waiting for? Call 0734 391064 and get in on the action.

Fonts in a whirl

Garamond, Bodini, Futura, Univers. Fancy 1,400 typefaces from the world's finest typography company, for only £149? That's the deal being offered on Fontworks new CD-ROM: *The Berthold Diamond Types CD*. The disc contains 300 dpi versions of all Berthold fonts. If you wish to use them at higher resolutions, you can unlock the professional version for £45, or bag the entire lot for £5,500 – a saving of over £6,000 on the list price of £11,500! These offers are only valid until the end of June, so give Fontworks a call now on 071 490 5390.

New PowerPC boost

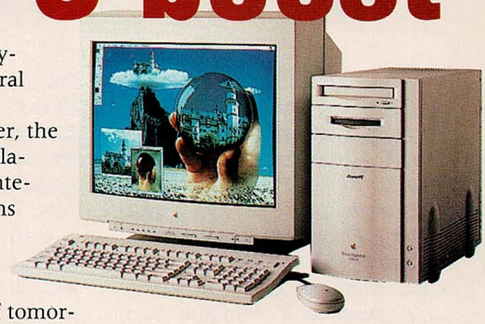
IBM and Motorola have developed a new 100 MHz version of the PowerPC 601 processor which is at the heart of Apple's acclaimed PowerMac range. The new chip is expected to run 25% faster than the PowerMac 8100's current processor. What's more, it manages to achieve this blistering performance despite being smaller and using half the power of other 601 processors.

IBM and Motorola, Apple's partners in the PowerPC initiative, are very keen to push these new RISC processors, which offer twice the performance of comparably-priced conventional processors. To this end, three further chips are in the pipeline, the smaller 603 which is destined for notebooks, and the 604 and 620 series for heavy-duty workstations and general server work.

In the meantime, however, the 601 (with its language translation, 3D image rendering, integrated office communications and voice recognition capabilities) should improve the consortium's chances of cornering a large share of tomorrow's DTP market.

Now the new 100 MHz processor look set to put a further nail in Intel's coffin. The company won't go down without a fight though, and it's combating the PowerMac threat with a campaign promoting new 100 MHz versions of its CISC-based Pentium processor.

While production of the 601 chip will begin in the autumn, Apple hasn't revealed yet whether it will be used in forthcoming PowerMac models. For more details on the PowerPC chip range write to Motorola at: 88 Tanners Drive, Blakelands, Milton Keynes, MK14 5BP.

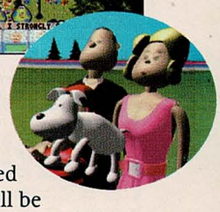


The new 100 MHz 601 processor is 25% faster than the PowerMac 8100's current chip. Spoilers and go-faster stripes, anyone?

The ride of your life

If you're a big fan of either *Populous* or *Syndicate*, then you'll be first in the queue for Bullfrog's latest game, *Theme Park*. The object of the game is to build the most profitable digital Disney Land while taking on 40 other competitors from around the world.

Theme Park has three levels: Sandbox, a basic construction site; Simulation, where you have to make your attractions both safe and fun for visitors; and Business which plunges you headlong into marketing and contracts. The first thing you have to do though, is choose a location. The site – which can be anywhere in the world (but not Paris, eh?) – then has to be filled with your choice of 32 purpose-built and six user-definable rides. And just to add a certain realism to the whole shebang, you can then position 16 shops within your park. Then the there's security thing to deal with – just in case some impudent thugs decide to do some construction of their own.



World domination has never been so much fun!

Electronic Arts (who can be contacted on: 0753 549442) will be handling the distribution of both the floppy disk and CD-ROM versions of the game, and you can book your ticket for just £44.99.

MORE POWERMAC APPLICATIONS

The list of forthcoming native applications for the Power Macintosh seems to go on and on. This month's list includes:

Product	Publisher	Telephone number
Color Central 2.1	Aldus	081 568 8868
Excel 5	Microsoft	0734 270000
FoxPro 2.6	Microsoft	0734 270000
Freehand 4.0	Aldus	081 568 8868
LetraStudio	Letraset	071 928 3411
MacroModel 1.5	MacroMedia	081 200 8282
Macwrite Pro	Claris	081 756 0101
Office 4.2	Microsoft	0734 270000
PageMaker 5.0	Aldus	081 568 8868
PowerPoint 4	Microsoft	0734 270000
Premiere 4	Adobe	081 547 1900
RAM Doubler	Connectix	081 200 8282
Trapwise 2.0	Aldus	081 568 8868
Vicom Connect	Vicom	0202 293 233
Visual Basic	Microsoft	0734 270000
Word 6	Microsoft	0734 270000
Works 4	Microsoft	0734 270000
XPress 3.3	Quark	081 200 8282

Roaring to go

Following the introduction last year of its 1930s, '50s and '60s collection of images, Hulton Deutsch has now launched its *1920s Decade* CD-ROM. The new package contains 25,000 black and white photos of the roaring '20s in full effect. From the high-life of 'flapper' aristocrats to the utter deprivation of the General Strike, the disc draws on the best of Hulton Deutsch's collection of 15 million images.

Running on any colour Mac with a CD-ROM drive, each of the *Decade* discs cost £117.50. For more information give Hulton Deutsch a bell on 071 266 2660.

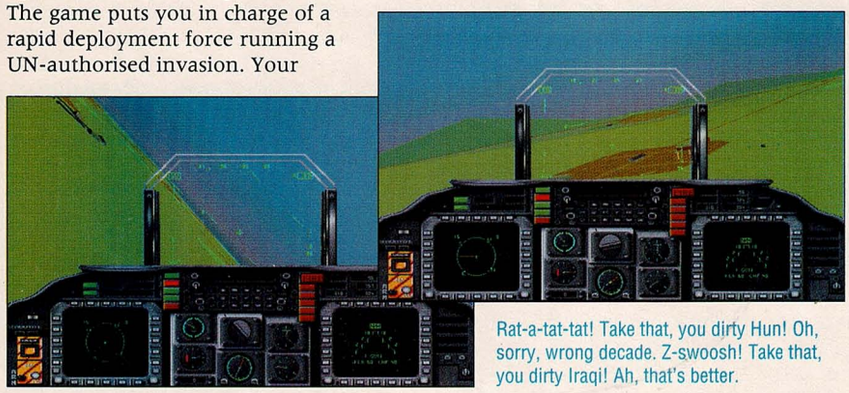
PowerMac blasts off

One of the oldest UK software houses, Domark, has just released the first game specifically designed for the PowerMac range. *Flying Nightmares* combines a state-of-the-art flight simulation with strategic war-gaming and draws on RISC technology to deliver fast arcade action and smooth realism.

Developed from *AV8B Harrier Assault* on the PC, the game is bang up to date in more ways than one. The game puts you in charge of a rapid deployment force running a UN-authorised invasion. Your mission, as squadron leader of a fleet of jump jets, is to take on the armed forces of an invading force by deploying your sea, air and ground forces. Thankfully, you have laser-guided missiles, cluster bombs and radar-jamming pods to chuck about when military guile begins to evade you. You can fly up to four missions at the same time and switch between different aircraft, passing campaign control to the computer while you concentrate on flying and dog-fighting.

The game's animation and scrolling are far slicker than those used in the original PC version. The game will also run on standard Macs with colour capability – albeit with some loss of speed.

Although Apple is understandably keen to attract games developers to the PowerMac, Domark is, as yet, the only company to have made a public commitment to the platform. Let's hope *Flying Nightmares* sells enough copies to encourage more native PowerMac games – all that raw power under the hood should ensure some stunning releases. *Flying Nightmares* costs £29.99 (the standard Mac version is included in the same box). For more information call Domark on 081 780 2222.



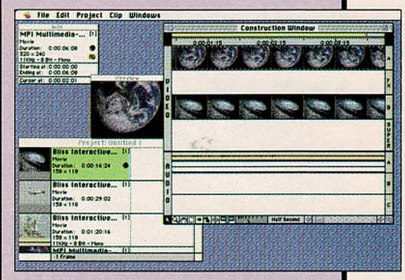
Rat-a-tat-tat! Take that, you dirty Hun! Oh, sorry, wrong decade. Z-swoosh! Take that, you dirty Iraqi! Ah, that's better.

Premiere powered-up

Fast video editing on the Mac is now a step closer with the latest upgrade of Adobe's leading video application, *Premiere*. *Premiere 4.0* now runs in native mode on PowerMacs, offering substantial performance gains, most noticeably on *QuickTime* movies which make use of *Premiere's* built-in special effects, filters and overlays.

The upgrade will also be available – in the same packaging – for use on conventional Macs. The most significant enhancement is the new Trimming window which really simplifies common ripple and rolling edits. Other improvements include automatic insert edits; customisable filters and special effects; unattended batch processing; a pop-up tool menu; time-lapse capture and support for *Illustrator 5.0* and *5.5* files.

Prices of new and upgrade packages were unavailable at the time of going to press, but you can call Adobe (081 547 1900) for more information.



Premiere 4.0 offers plenty of new and improved features for video editors.

Multimedia Director overhauled

The power and performance of MacroMedia's leading multimedia authoring tool *Director* have been substantially improved with the release of version 4.0, which is now available as an upgrade for £199.

The new version compiles its Lingo scripts to enable faster execution of *Director* movies. Further speed enhancements include improved data retrieval from storage devices such as CD-ROM drives, and a revised file structure to reduce disk access time.

At a scripting level, 4.0 doubles the number of channels in a *Director* Score to 48, and provides interactive handling for 32,000 'cast members' (data such as stills, titles, sounds, videos) per movie. In addition, file size is now unlimited. Version 4.0 also enables several *Director* movies to run on-screen simultaneously without any loss of interaction between windows. This means users can pass info from one movie to another (bit of a first, that).

***Director's* detractors will like 4.0's colour coding and drag-and-drop facilities, which enable users to directly place cast members into scores. Developers will also benefit from full binary file compatibility with the forthcoming *Director For Windows*, which should provide easy cross-platform authoring.**

***Director 4.0* costs £1,175 and is available from Computers Unlimited on 081 200 8282.**

Radius hardware & software – free

If you own any Radius software or hardware and are thinking of buying or upgrading to a PowerMac, call Computers Unlimited on 081 200 8282 before Tuesday 31st May. From now until then, Radius will upgrade all its graphics, acceleration, display products and associated software for users wishing to use them with PowerMacs – and you don't have to pay a bean.

Scottish multimedia bash

The Scottish Hypermedia Users' Group is to hold an all-day multimedia workshop at St Andrew's University on Saturday 21st May. Events include tutorials and workshops with guest developers.

The all-day event costs £25 for members, £15 for students and £35 for other non-members. For more information call the Scottish Hypermedia Users' Group on 0698 882935.

Peace of mind for less

MacTools, the impressive suite of utilities offering disk repair, optimisation, data recovery, automatic back-up and anti-virus protection, is now part of a bargain bundle put together by Iona Software. For £94, buyers of *MacTools 3.0* will also receive a copy of *StuffIt Deluxe* and *Underware*. Bought separately, these three products would cost £249. For details of availability call Iona on 081 241 8925.

Meanwhile, Central Point Software, the creator of *MacTools 3.0*, has released a PowerMac version of the package with an improved performance of between 200 and 400% on functions such as disk-fixing, copying, un-deleting and disk-scanning. *MacTools* was the first dedicated PowerMac product to be released. In fact, it came out on Monday 14th March – the day the PowerMac was launched. It has a suggested retail price of £99 and is available from Central Point on 081 848 1414.

Free CD with PageMaker

Aldus is giving away a twin CD-ROM package worth over £500 to anyone buying its leading DTP package, *PageMaker 5.0*.

The *PageMaker ProPack* is a collection of type, art and photos which enables users to add extra style to *PageMaker* documents. It includes over 250 high-end EPS illustrations and 177 graphics. In addition, the CD contains 50 royalty-free, high res, photographic images; 84 illustrations and symbols; and two complete typeface families. Existing users can buy the pack separately for £395. More information from Aldus on 081 568 8868.

APPLE BYTES

Pro PhotoCD viewer

Kodak's *PhotoCD Access* software – the low-cost PhotoCD viewer and editor from the people who make PhotoCD – has now been enhanced to support the company's new higher resolution Pro PhotoCD format. It provides an on-screen contact sheet for images, as well as basic functions such as cropping and image rotation. These images can then be exported to page-layout or image enhancement and manipulation programs. Since its introduction, 200,000 copies of *Access* have been sold. The latest version is available for £39.95 from Computers Unlimited on 081 200 8282.

More Optical storage on the way

Philips has almost doubled the current capacity of most optical disks with the launch of a new 230Mb 3.5 inch disk. Although the disk can't be read by existing 128Mb format drives, IBM and Fujitsu will launch compatible units later this year. For more information call Philips on 0101 49 611 962 8804.

■ For an overview of storage options including optical disk, see the special feature in MACFORMAT 12. (If you missed that issue, turn to the MACFORMAT back issues service on page 94.)

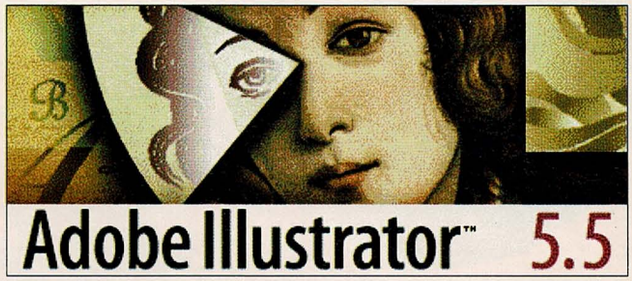
How to be really remote

Fancy a free guide to accessing Mac networks over the phone-line? Leading network company Shiva has produced the imaginatively-titled booklet, *How To Successfully Implement Remote Network Access* to provide answers to all your network questions. It'll even show you how to log on to your office Mac from home (Oh, what joy! Teleworkers of the world, you have nothing to lose but your leisure time!). Call Shiva on 0753 833007 or fax on 0753 831383 and the booklet will be winging its way to you, before you can say '24-hour working day'.

Powering-up your portable

News has it that those clever souls at Connect IT have manufactured a power adapter for Apple's PowerBook, Duo and Newton range which plugs into your car's cigarette lighter. The adaptor costs just £60.45 (including delivery). For more information call Connect IT on 0525 240008.

Acrobatic *Illustrator* upgrade



Adobe is all set to release a PowerMac version of its leading graphics application *Illustrator* which it claims will run two to four times faster than standard Mac versions. With it comes a host of new features, which will also be available as an upgrade to standard Macintosh versions. Chief among the new enhancements offered by *Illustrator 5.5* is the introduction of plug-in filters which will provide greater control over the program's trapping and text-handling capabilities.

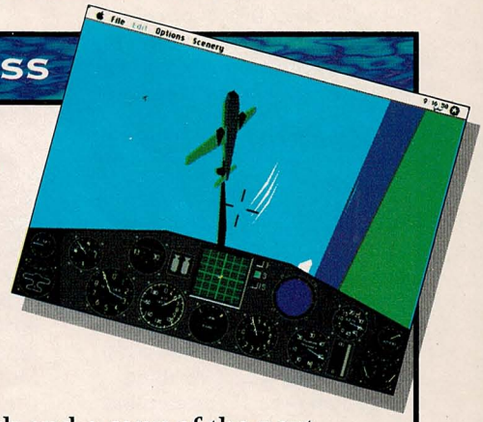
Trapping is made possible by Adobe's 'Pathfinder Trap' feature, which can handle process and custom colours; compensate for paper stretching; tint variable pastel colours; and convert custom colours to process colours from within the application. Innovations in text handling include a user-definable spell checker; a utility to search and replace by font; graphic tabs; smart punctuation and a change case utility.

Graphics handling has also been radically improved: *Illustrator 5.5* now offers expanded file import support, which means that TIFF and PICT images can be imported directly, without your first having to convert them to EPS files via *Photoshop*.

But perhaps the most interesting addition is the inclusion of Adobe's innovative Acrobat Technology. This enables documents to be saved into a Portable Document Format (PDF), so they can be viewed, edited, saved, printed and distributed in an entirely independent manner. Adobe is pushing Acrobat as the digital paper of the future – PDF files will run on any operating system, irrespective of whether it has the original application used to create the file installed or, indeed, the correct fonts. It stands to reason, then, that everyone purchasing *5.5* will receive a free copy of *Acrobat Distiller* and *Exchange* – the key components of the technology – as well as 180 Adobe fonts, *QuickTime* movies featuring expert tips, 100 examples of clip art and a lite version of Adobe *Dimensions* on CD-ROM.

Illustrator 5.5 costs the same as the previous version: £564. Upgrade prices have yet to be confirmed (although users who purchased version 5.0 after March 14th will receive free upgrades). For more information call Adobe on 081 547 1900.

HELLCATS OVER KINGS CROSS



Compete in the first All-England Hellcats Combat Championships!

Win the first Hellcats Trophy, a Gravis joystick and a copy of the next generation flight sim, *A10*! All runners-up win a Gravis joystick

MACFORMAT, in conjunction with training company MacUniversity and *Hellcats* publisher Parsoft, is running a one-day event in which you can sharpen your flight-sim skills and become All-England Hellcats Champion! Topics to be covered include:

- Game strategy – master the basic flight techniques and learn how to earn maximum points
- Combat techniques – getting awkward customers off your tail, dive bombing, mission strategies
- Tips and techniques
- Demos of Parsoft's latest flight sim, *A10*, and what's on the horizon – including new terrain-mapping techniques
- Plus the first All-England Hellcats Combat Trophy, a knockout competition for all-comers!
- Softline will be there, offering you the chance to play all the best Mac games
- A licenced café, serving food and drinks, will be open all day

Hellcats over Kings Cross:

The place: The Cross nightclub, 27-31 The Arches, Kings Cross Goods Yard, London N1
The date: Saturday May 28th
The time: 10.00 am to 5.00 pm
Entrance fee: £10

For an entry form, send your entrance fee to:
MacUniversity, Southbank House, Black Prince Road, Albert Embankment, London SE1 7SJ.

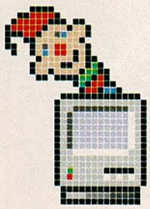
But hurry! No requests will be processed after Wednesday May 7th

For more details contact MacUniversity on 071 582 3702

This month: a T-shirt for every letter. Next month...? Take a chance and write to 'Apple Talk', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

In a fit of generosity brought on by MACFORMAT's increasingly wonderful sales figures, Stuart the publisher has okayed a MACFORMAT T-shirt for the writer of *every* letter published this month! So I thought, let's try to get as many in as possible.... Will he realise what he's done before next month? Send your letter in now – the shorter the better. At the very least it might get printed!

ResEdit Primer



Thanks for giving away *ResEdit* with MACFORMAT issue 11. *[You're welcome. – Ed]* Neat little thing, that booklet that came with it, too. One thing though: on page 15 it states that caps are not mandatory for the private resource name. This is not the case in System 7, which requires at least one capital letter. (Actually, it doesn't, but Apple reserves the right to use any signature which is all small letters or numbers. Which is, I guess, the same thing.) Just thought you might like to pass that along to your readers...

Steve Marsh
Stirling
via CIX

You were right.

Games machine

When will software houses treat the Mac as a serious games machine? When a company such as Lucasfilm releases a big game it comes out on PC or Amiga, while we have to be content with also-rans, or else wait a year for the Mac version of something like *Monkey Island II*. Games houses should take a leaf out of Bullfrog's book – they know a good opportunity when they see it.

Matthew Hancock
Glasgow

The Mac and the Amiga are based on the same central processor chips, the Motorola 680x0 series, and Bullfrog's boss Peter Molyneux says it isn't actually that difficult to port a game from one to the other. The only problem, he reckons, is fitting in with Apple's stringent interface guidelines, but once you've worked out the routines for that you can apply the lessons in other cases. Some people even release games without bothering about the official requirements (we've certainly seen plenty of games like that here at MACFORMAT). Makes you wonder why other software houses don't share Bullfrog's commitment to the Mac.

Monkey Island II. Worth waiting for? Would *you* buy an Atari ST just to play this a year earlier?

Lost real estate

In your March issue you mention that you can reclaim lost floppy disk real estate by rebuilding the floppy's Desktop file. Under System 7, however, you can't do this if you've deleted everything on the disk. After you've thrown everything on the disk in the bin and emptied it, create an empty folder on it and *then* eject the disk and reinsert it with [command] and [option] held down.

I don't know why this works better, but I suspect it's got something to do with a less-than-intelligent System. ("Oh, an empty disk! Goody, that means I don't have to do anything with it!")

Morten Ingebrethsen
Stavanger, Norway

Another thing to wish for in System 8.

Fun Fonts

In MACFORMAT 9, in reply to a question from Jackie Gilligan, your Mac Answers section states that the font Arial costs around £165. In fact it is available as part of the Monotype PostScript Value Pack, 57 typefaces in all, which is free when you buy *Suitcase* from MacWarehouse for £47. It is also in the Adobe Type Set Value Pack, with 30 typefaces, for £35, which includes *Adobe Type Manager*. Monotype Fun Fonts at the moment costs £23 plus postage direct from Monotype and has the full family of Amasis, and various fonts and symbols – 25 fonts in all.

Nigel Hazle
Wokingham, Berks

MacWarehouse advertises regularly in MACFORMAT. You can contact Monotype on 0737 765959. A TrueType version of the Arial font family (six varieties of Arial in all) is available as part of the special package of 100 classic Montype fonts for only £49.95 direct from MACFORMAT. TrueType fonts are ideal if you don't have an expensive PostScript printer. See page 89 for the details.

In Stalled

I'm no mental giant when it comes to computers, and I can't for the

CRUISING THE KEYS

This month's selection of keystroke shortcuts, tips and discoveries

Colin Dalziel of Bridgnorth in Shropshire has these few tips which he says he's picked up over the years...

- You can sometimes force a 'frozen' application to quit, enabling you to save your work in any other running applications before you restart your Mac. (If you choose to continue working, the problem that caused the first application to hang will often cause other severe, and unrecoverable, System crashes.) To 'Force Quit' the current application, hold down the [option] and [command] keys, then tap the [esc] key.
- When viewing an Open or Save As dialogue box, make sure the list is selected (a dark border should appear around it; if not, click in it), then type the first few letters of any name to select it quickly.
- System 7 too slow at opening windows? Open the Views Control Panel and check whether Calculate Folder Sizes is set to On (an X appears in the check box). If you are using a listing view (View by Name, Date, etc) in a window, your Mac may be spending a lot of time adding up the sizes of all the items in a folder to calculate its size. Turn this feature off for an increase in performance.
- Don't forget System 7's Drag-and-Drop feature: you can drag files on top of an application program's icon and the application will often launch them, even if the file was created by a different application. You can drag a text file on top of an alias of Microsoft *Word*, for instance, and it will open the text file.
- If you'd like a look back at the original startup screen for the Apple Mac, hold down the [option] key while you select the Apple menu. Instead of the usual 'About This Macintosh' option you will see 'About The Finder'. Select this to see the original startup screen from System 1! Wait a few seconds and you will see credits for the various versions of the Finder over the years.

If you've found any hidden secrets or keyboard tricks, either in the Finder or in any program, send them in!

life of me read the ReadMe file on MACFORMAT's May cover disk. When I double-click on ReadMe, all I get is a message saying the file can't be opened because the program that created it hasn't been installed. The same goes for the info files for all the other programs on the disk. What am I doing wrong?
Graham Nown
Southport

It sounds like you haven't got TeachText *on your Mac – search for it using [command] F when you're at the desktop or look for it loose in your System Folder. If you don't have a copy or can't get one, try launching your usual word processing program and* ***then*** *using its* ***Open*** *command to open the ReadMe files. Most Mac WP programs should be able to cope.*

Some sort of index

Could MACFORMAT include some sort of index showing what was reviewed and what articles were run in which issue? This would help those who come across a problem and have to look through all their back issues to find the appropriate advice. And when you're giving tips or demonstrating how to use applications, could you sometimes use older versions of applications? Not everyone has *PageMaker 5.0, Word 5.1, XPress 3.3*, etc.
David Jones
Cardiff

We always try to keep earlier versions in mind. And an index sounds like a great idea – we could do with one ourselves – but we haven't had the time to compile one. Tell you what. You get a T-shirt for mentioning the idea, so it's only fair that we offer a free subscription for the first reader who sends in a usable, comprehensive and accurate index for MACFORMAT 1 to 12. (But if you haven't yet started work on one, it might be an idea to contact us first and talk about an appropriate format...)

Why not?

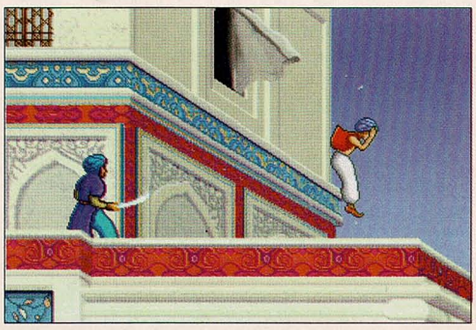
Why don't you start a cheap BBS with Internet/Onenet access? And why not put readers' own material on the cover disk – stuff like *HyperCard* stacks and scripts, tips, programs, etc? I for one would rather see this sort of stuff than demos of high-priced, bloated commercial software. And can you please stop the silly addresses bit? Like your recent 'Those bloody kids' address for education coverage. It's not big and it's not etc...
Arthur Battram
Luton

A MACFORMAT BBS? Watch for a special announcement next issue. We'll always consider any reader's submissions for the cover disk, and suggestions for what you'd like to see on it are always welcome. As for the 'silly' addresses: over to you, the ranks of MACFORMAT-dom assembled. Would you prefer straightforward addresses like 'Education' and 'Letters Page'? Answers to 'Improperly Addressed', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

A Luddite writes

I waited in eager anticipation for MACFORMAT's cover disk demo of *Prince of Persia 2*. And there it was on issue 12! My excitement, however, was short-lived. The blurb inside the mag informed me that I need 256 colours to play. I am some 254 colours short of this requirement. Do the developers of these games not appreciate just how many people are still using monochrome Macs? I will wager that the best selling games are those that operate on all Macs, not just the technicolour versions. I have neither the desire nor the means to fork out for a colour Mac. B&W is fine for most of my work. Yes, I am a Luddite.
Paul Foster
Peterborough

Not all new games require 256 colours. When you install Bullfrog's stunning new ***Populous II****, for example (watch for the review next issue), you get to choose between three versions of the game, designed for different monitor capabilities – and all three work fine in greyscales too. Last issue, we noted that* ***PGA Tour Golf II*** *worked just as well in B&W. But surely most people want new games to look as spectacular as possible? And that must mean colour...*



The demo of *Prince of Persia 2* on last month's MACFORMAT cover disk needed a 256-colour monitor (and lots of memory, but we won't mention that). Could you cope with it in B&W?

Not in stock

Is there a law against dealers advertising products they don't have in stock? I ordered *SimCity 2000* for Christmas from a very reputable dealer and was assured over the phone that it was in stock. However when it hadn't arrived a month later a call to Maxis (the distributor) revealed that it wouldn't even be available for another two weeks!
Daniel Cressey
London NW5

Coming soon! No, really. Any day now. I know, 'cos I read it in an advert...

Dealers often place their adverts well in advance to coincide with the release dates set by software houses, and then get caught out when the products fail to appear on time. The Advertising Standards Authority (tel: 071 580 5555) told MACFORMAT that the important thing is that the consumer is not misled. Advertisers should get as firm a guarantee as they can that the product will be ready by the due date, but then if, for reasons beyond their control, the advert appears before the product is actually available, the advertiser must inform anyone who orders it that there has been a delay and offer either a firm delivery date or a refund. Telling you porkies over the phone is definitely out of order.

Baffled of Devon

Your review of printers in MACFORMAT 11 in April had me baffled. You find as a 'bad point' of the StyleWriter II that it "takes up a lot of desk space" (presumably only with the paper tray extended), and then you find as a 'bad point' of the HP DeskWriter 310 the fact that it doesn't have a paper tray! If it did have one, I can only assume you would have said that it took up a lot of desk space...

Personally, I think the StyleWriter is compact, extremely good and easily available for much less than the price you quote – and I don't have a vested interest in saying so. Please don't feel you *have* to find something negative to say about a product. If your T-shirts are good, I'll say so!
Brian Cook
Dartington, Devon

What do you mean 'if'? And for the record, all our reviews quote official recommended retail prices, including VAT. It is always worth shopping around, especially in the case of Apple products: Apple's policy is that its Authorised Resellers are free to set their own actual selling prices.

TV quiz PhD

Re: 'quick brown fox' variations. How about a minimalist 'Mr Jock, T.V. quiz Ph.D., bags few lynx'? Sure it's full of abbreviations and doesn't make a lot of sense but count the letters – 26! Plus comma and full point typing practice thrown in. Why type more?
Eamonn O'Leary
London W5

OK, that one takes the cake for shortest alternative. But I'm still waiting for any Mac-related ones.

Fluent Martian

When I bought my IIvi about a year ago, I received a set of CD-ROMs with it as part of the package. One of these contains what is apparently a complete working version of *HyperCard 2.1*, less all the standard stacks except Home – I can certainly select level 5 and create cards, for example. What rights, if any, do I have to this application, and others such as *MoviePlayer*, which are supplied on CD-ROMs I got in this way? The documentation gives no guidance except a few paragraphs of the usual legal disclaimers written in fluent Martian. Similarly, can I incorporate the fonts I was instructed to drag from the CD-ROMs to my System Folder into my own documents?
Dave Lockwood
Leamington Spa, Warwicks.

Whether they're thrown in as part of the package or paid for separately, these programs and fonts are yours, and you have the same rights to them as if you'd bought them individually: in a nutshell, you yourself can use them as you wish, but not make copies to lend, give away or sell to others.

Got something to say? Write to MACFORMAT at the address opposite.

What's New?

Andy Storer reports on the New York christening party for the Power Macintosh. What's it mean? It means Andy blagged a free trip, for a start...

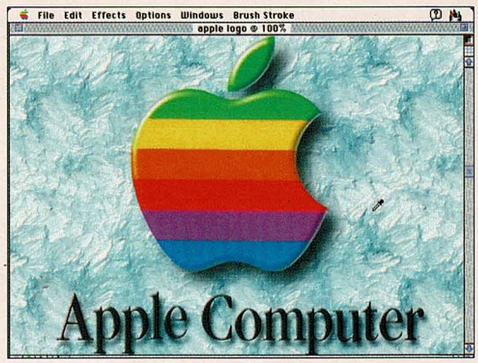
Welcome to the future: a 40-channel interactive TV; Nicam digital video; Nakamichi CD, tape and tuner; and Bose wall-mounted speakers – and that's just the hotel room. Tune in to Hot97, whack the volume way up, open the blinds and down below it's New York, New York. Yours truly is over for the Power Macintosh launch, courtesy of Apple. The place hasn't changed much – razor wire, rising steam, roaming psychos, cop sirens, hip hop and major fear – but it's still the greatest city in the world. Easily. And it's the perfect place to christen the new Power Macintosh range. Big Apples indeed.

To add just a little more pizazz to the proceedings, Apple chose to christen its new baby on the anniversary of Einstein's birthday. And so, at 10am on Monday March 14th, 1994, myself and around 500 assembled journos and tech support guys eased our way into the Lincoln Center for the floorshow.

Hold on to your hats! Apple proves that it spares no expense in flying a few lucky journalists halfway around the world. Mind you, I'm still smarting from the carpet burns.

I arrived early to bag a good seat up-front, only to find myself sitting next to the Head Engineer for the whole PowerMac project – Phil Koch. He was naturally pretty chuffed; after three years of working like hell to make the fastest PC in the world, the launch was right on time. Best moment, Phil? "Getting the Finder up and running on a PowerPC chip for the first time" Worst? "Dealing with 68K chauvinism." Sorry, Phil? "...The reluctance – higher up – to move away from the 68000 series processor." Expecting any surprises today then, Phil? "Not really. We're all here because this thing has got to be officially born; everyone here knows everything already."

True enough; I had written all the 'official' MACFORMAT news stories a month earlier: prices, specs – the works. The launch was really just an expensive 90 minute christening party for a product that's all ready to roll then. (Still, it was great for all the journos who'd flown in especially – no stories to file.) So when the lights dimmed and Apple's CEO, Michael Spindler, strode along the spot-lit catwalk, you knew it was all going to be a little self-congratulatory. But why not; there was a lot of back-patting called for – and it's what Americans do best.



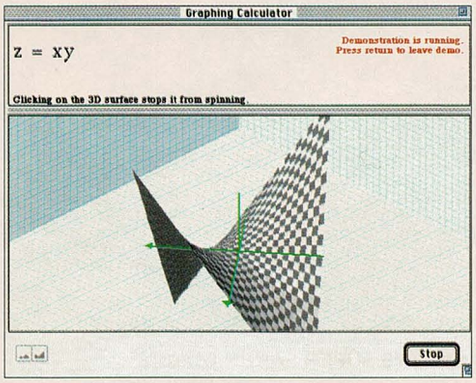
For the moment, this is what PowerMacs are all about: real-time, ray-traced graphics spinning as superfast native applications. OK, so it doesn't look all that hot on page, but it's utterly gob-smacking on-screen.

The future's so bright...

Spindler's speech had a single theme: Apple's commitment to providing real solutions to real people's problems – at affordable price/performance ratios. To that end, Apple is offering future-proof PowerMacs at fierce prices with full PC compatibility thrown in. OK, it might cost you £300 for *SoftWindows*, and you'll need at least 16Mb of RAM on board, but you'll have the equivalent of a 25MHz 486SX PC on your desktop. So I reckon he's on to a winner.

And you didn't need to listen very long to be convinced by Apple's other assembled marketeers. The PowerMac's production capacity is around 6,000 machines a day, and pre-orders already amount to over 150,000. (Pentium PCs have only ever managed to sell half that number during their entire trading history.) PowerMac sales are expected to top one million over the next 12 months and, over the next three to five years, Apple plans to increase its worldwide market share from 11% to 16%. Welcome to the future; it's Here and it's Now.

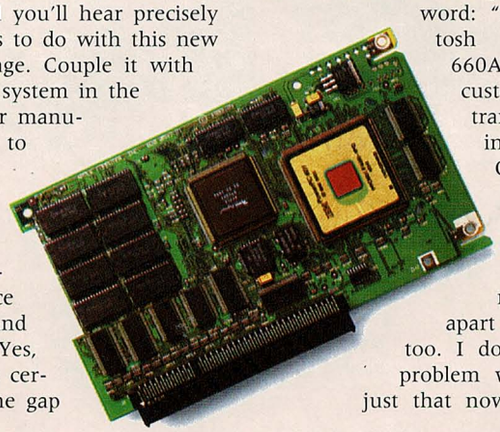
After Spindler's spiel we were treated to a bunch of testimonials from various academics and corporates on just how great the PowerMac is, followed by some really deft demos, just in case you still needed persuading. Then there was a satellite message from Microsoft's Bill Gates, smiling in the knowledge that he'll win



That little calculator in your Menu items hasn't changed during the ten years since the launch of the original Mac. So Apple decided it was time for an overhaul and here's the result: all 590K of the Graphing Calculator.

out whichever company brings the most packaged chips to market. Yes indeed, welcome to the future. A future which Intel and its clients will be approaching with a good deal of apprehension. After all, Apple now delivers the most powerful, the most affordable and the most compatible PCs in the world. Moreover, since Apple has seized the hardware advantage, it's now likely to license its hardware and operating system to third parties. The reasoning? Major dosh of course.

Talk to Apple's bosses, like Executive Vice President Ian Diery, and you'll hear precisely what the company plans to do with this new found hardware advantage. Couple it with the friendliest operating system in the world, license it to other manufacturers and prepare to meet the forthcoming personal communications revolution head-on. Today's PowerMacs are at the forefront of tomorrow's extensive voice processing, telephony and multimedia capabilities. Yes, the Power Macintosh is certainly ready to bridge the gap between personal comms and digital superhighways at cost-effective rates. Diery's vision is so bold, in fact, that he claims that "Power Macintosh will do for multimedia what PCs did for spreadsheets."



This is the upgrade card which plugs into the PDS slot on Quadras, effectively doubling their performance. Apple has now announced plans to provide upgrades for its entire LC range, too – although a third-party manufacturer (Daystar perhaps?) may well get the licence.

The old metaphor we've all come to know and love, 'Point and Click', will be overhauled by the more far-reaching interface 'Ask and Tell' – an option made possible by RISC technology. And let's face it, isn't that what everyone wants? A world where speech, voice and gestures replace the '80s windows, icons, menus and pointers? Apple plans to build on the power of RISC, to take the lead in what it deems to be the future of personal computing – with system level software agents, animation, 3D design and high-resolution video joining voice communications as the key user demands. What's more, the capabilities of PowerPC will be blessed with a new user interface, an 'active agent', an 'application for the Internet', and a 'universal mailbox' for a variety of media (electronic-mail, fax and voice included).

But before you start thinking this is all about high-end machines with a £4,000 price point, be reassured that Apple has announced that it's looking at providing PowerPC upgrades for the entire LC range – not just its newest arrivals. When all this is scheduled to happen is still unclear – but, although Diery wouldn't confirm it, you can bet on a company like DayStar getting the rights and pumping out £500 PDS slot upgrades by Christmas. Add the inevitable PowerMac notebooks and Duos due out this summer, and you're suddenly looking at an entire Mac range based on RISC technology.

If you're looking to upgrade this summer, you may like to know that prices in New York for all logic boards work out a couple of hundred quid cheaper than in the UK. Even the PowerMac upgrade card – which you can pick up in the UK for about £650, if you shop around – sells for just over £400 in the States. So I'll just remind you of the £199 return flight some airlines are currently offering, and leave the rest up to you.

Great expectations?

Interestingly enough – and I'm not for one moment putting myself forward as some kind of messenger of doom – the US promotional literature for PowerMac contains a curious little footnote, which I'll reproduce here word for word: "Apple expects Macintosh Quadra 610, 650, 660AV, 840AV and 950 customers will quickly transition to Power Macintosh. The Macintosh Quadra 605 will remain in the line." Now what does that suggest to you? That the entire Quadra range is to be dropped apart from the 605? Yep, me too. I don't think there's any problem with that though, it's just that now it's a case of *when* rather than an *if* – and little footnotes like that will probably sell more logic board upgrades than you would imagine. On the brighter side, you can expect the price of the Quadras which are still left in the retail channel to drop rapidly as the year progresses.

Talking of cheap deals: just before I left for America I bought a Newton. I've always been a sucker for gadgets, so when I was offered a half-price MessagePad I thought: why not? I can always flog it – without losing out – if it's a flop. So I taught it to recognise my handwriting during the seven-hour flight, then used it to take notes at the PowerMac launch and during subsequent meetings. And I have to say – to my great relief – I find it genuinely useful. It's not exactly what I'm after: I'd like a cellular fax, phone and pager built-in too, but until those arrive in the UK – and they will this year – it'll do.

What I like most about my Newton, though, is the way it organises all those disparate little odds and sods: scrappy ideas, numbers and reminders which I never know what to do with – except lose. The MessagePad is ideal for people like me, the kind who rely on Post-It notes, dictaphones and watch alarms, because they can't buy RAM expansions for their heads. And people for whom filofaxes are just thick slabs of hassle. At least these Newtons are fun – and you can get hold of plenty of freeware games and joke utilities like Star Trek Tricorder emulators. If Apple knocked the price down to £199 and bundled it with a pager, it'd clean up. It'd certainly be a better ploy than relying on loads of vague global travellers with meetings in 15 cities every half hour for the next ten years.

You can lease a wireless Newton pager for $70 a month in the States. This offers a coast-to-coast service which can deliver a 25-word message to your screen – no matter where you are. What's more, news briefs can be automatically downloaded to you four times a day. Now, this is exciting; only five years ago it was still the stuff of sci-fi. But I don't think we'll ever see a hand-held digital assistant which combines everything a mobile user requires. My wish list starts with a cell fax, phone and pager, but goes on to include an answering machine, radio, CD drive and TV. None of this is technically over the top; all these devices are available in portable formats. It's just that this Swiss army knife approach to digital assistants is unlikely to materialise, largely because there's more money to be made by offering modular systems. You want a pager add-on? Here's one for £50. A TV tuner? Yours for only £99. Low orbiting satellite link-up? Just bung us £500. Still, I bet the Japanese will sit back for a while, then come in all guns blazing. *Andy Storer*

Now, this is the kind of deal which would really make the Newton take off in the UK. A bundle like this, for around £19.99 a month, would surely clean up. (We'd need to get our cellular systems standardised first though.)

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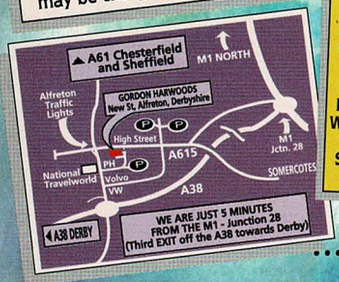

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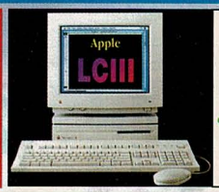

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	Quadra 610	040/25	4/160	68	✔	✗	£968 (£1137)	£1229 (£1445)	£1354 (£1591)	✔	✔	✔
	Quadra 610	040/25	4/160CD	68	✔	✔	£1174 (£1380)	£1449 (£1703)	£1559 (£1832)	✔	✔	✔
	Quadra 610	040/25	8/230CD	68	✔	✔	£1454 (£1708)	£1729 (£2032)	£1829 (£2150)	✔	✔	✔
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	Quadra 650	040/33	4/160CD	136	✔	✔	£1410 (£1656)	£1679 (£1973)	£1757 (£2065)	✔	✔	✔
	Quadra 650	040/33	8/230CD	136	✔	✔	£1694 (£1991)	£1959 (£2302)	£2049 (£2408)	✔	✔	✔
	Quadra 660AV	040/25	8/230CD	68	✔	✔	£1349 (£1586)	£1679 (£1973)	£1789 (£2103)	✔	✔	✔
	Quadra 660AV	040/25	8/500CD	68	✔	✔	£1469 (£1727)	£1749 (£2056)	£1849 (£2173)	✔	✔	✔
Apple Power Macintosh	6100/60	601/60	8/160	72	✔	✗	£1247 (£1466)	£1519 (£1785)	£1634 (£1920)	✔	✔	✔
	6100/60	601/60	8/250CD	72	✔	✔	£1587 (£1864)	£1849 (£2173)	£1975 (£2321)	✔	✔	✔
	7100/66	601/66	8/250	136	✔	✗	£2100 (£2467)	£2365 (£2779)	£2490 (£2926)	✔	✔	✔
	7100/66	601/66	8/250CD	136	✔	✔	£2285 (£2685)	£2549 (£2995)	£2674 (£3142)	✔	✔	✔
	7100/66-AV	601/66	8/500CD	136	✔	✔	£2901 (£3409)	£3086 (£3626)	£3209 (£3771)	✔	✔	✔
	8100/80	601/80	16/500CD	264	✔	✔	£3975 (£4671)	£4129 (£4852)	£4259 (£5004)	✔	✔	✔
	8100/80-AV	601/80	16/500CD	264	✔	✔	£4047 (£4755)	£4199 (£4934)	£4331 (£5089)	✔	✔	✔
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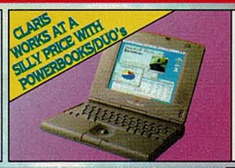

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	180	030/33	M-AM	4/120	Modem	✔	upto 16"	£1849 (£2173)
	180C	030/33	C-AM	4/160	✗	✗	upto 16"	£1699 (£1997)
	180C	030/33	C-AM	4/160	Modem	✔	upto 16"	£1949 (£2291)
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	230	030/33	M	4/120	Modem	✔	upto 16"	£1099 (£1292)
	250	030/33	M-AM	4/200	✗	✗	upto 16"	£1549 (£1821)
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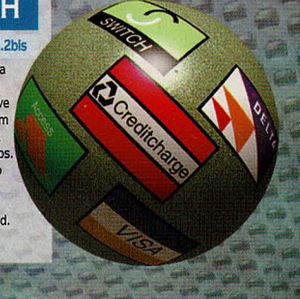

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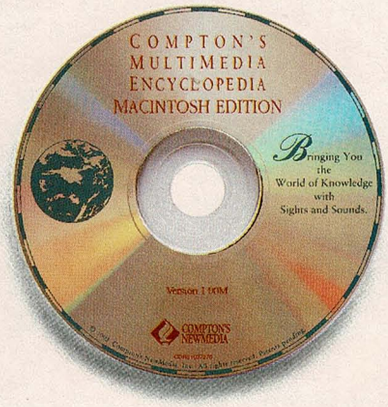
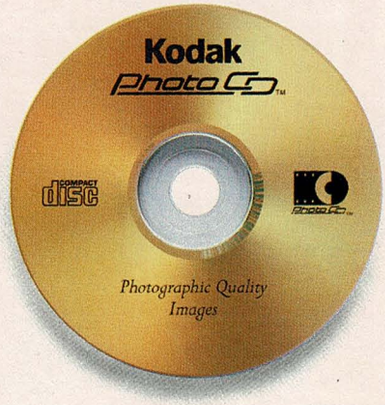
Here are three good reasons to own an AppleCD drive.



One CD-ROM can hold a shelf-full of business reference material, encyclopaedia or dictionaries—including text, superb colour graphics, moving images and sound.

CD-ROM is revolutionising how software is sold. With services like Software Dispatch,™ you can test-drive software before you buy. And once you've chosen, you can install your software instantly.



Kodak Photo CD makes it easy to store high quality photographs on disc—a boon for photo libraries and perfect for archiving or distributing your own pictures in a form that's ready to use.

It lets you do much more with your Macintosh.

Imagine anything you've ever wanted to work with: clip art, dictionaries, interactive encylopaedia, reference works, photo and type libraries, state-of-the-art games—all these are now available on CD-ROM.

And all you need to use them is an AppleCD™ CD-ROM drive.

With AppleCD, you can cut-and-paste CD-ROM pictures, sounds, music, even video clips into your files. Think what this could do for your work, education or enjoyment!

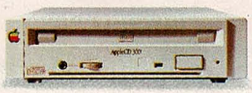
CD-ROM is also fuelling exciting developments like Kodak™ Photo CD.™ With this, you can transfer your photographs to CD-ROM—and then access them with the AppleCD 300 drive. The quality is superb and it's so easy to manipulate your pictures just the way you want them.

SOFTWARE DISPATCH

You can also shop for software using CD-ROM catalogues that let you try before you buy–the most convenient and effortless way to purchase software!

It costs a lot less than you thought.

The AppleCD 300 drive costs just £199 (ex. VAT)*—which is a snip when you consider what it can do for you. And so you get the best from CD-ROM, it offers a brilliant specification—double-speed performance, multi-session Photo CD and the ability to play audio CDs.



To enjoy multimedia and digital sound to the full, go for our AppleCD Multimedia Kit—the AppleCD 300 drive, AppleDesign™ Powered Speakers and software—all for as little as £295 (ex. VAT)*.

And to give you even more, when you buy the AppleCD 300 you'll receive WorldTour Golf and Multimedia Flashcard CD-ROMs. Or when you buy our AppleCD Multimedia Kit, you'll get Compton's Encyclopaedia, Just Grandma and Me and Macromedia Clipart CD-ROMs.†

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Every Macintosh is CD-ROM ready.†† Which means that you don't have to add special interfaces or sound cards. All you do is plug in your AppleCD drive and start enjoying the power of CD-ROM. From then on, everything else is equally simple.

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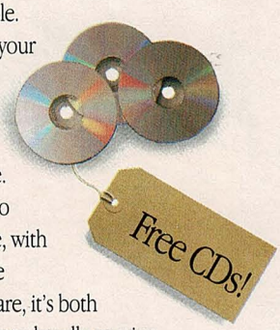

To see just how much you can do with an AppleCD drive—visit your local Apple Authorised Reseller today. Alternatively, for the name of your nearest Authorised Reseller, call the Apple Information Centre free on 0800 127753.

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Apple

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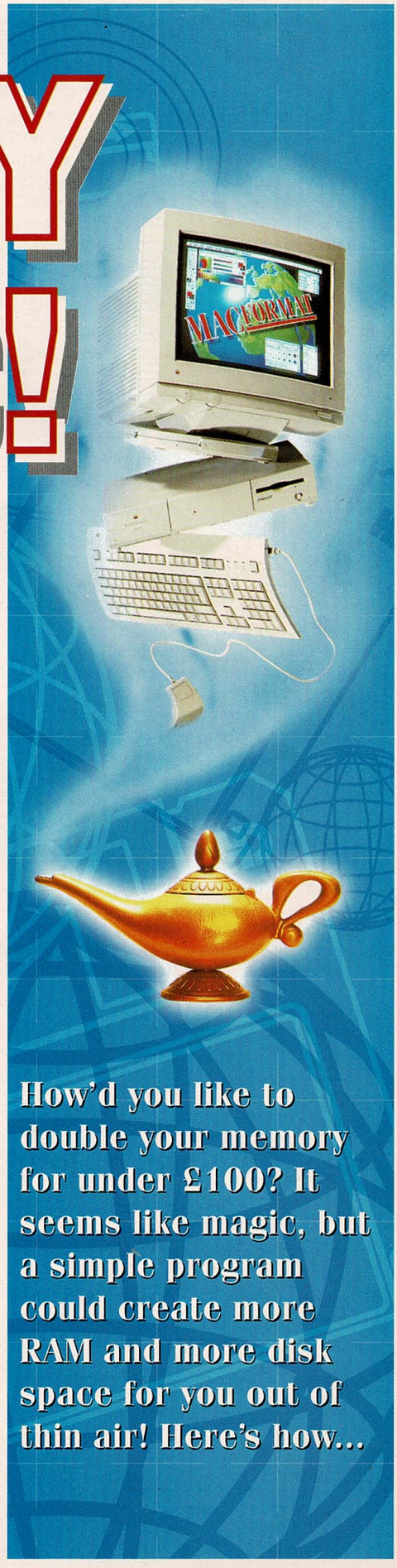
MEMORY MAGIC!



How'd you like to double your memory for under £100? It seems like magic, but a simple program could create more RAM and more disk space for you out of thin air! Here's how...

No matter what you use your Mac for, no matter how huge your hard disk, the time will come when you run out of disk space. What can you do? Last month's MACFORMAT looked at some hardware solutions; this issue *Simon Cox* explores the software alternatives that can expand your existing disk as if by magic... And for those times when you want to run more applications at once (or just one very memory-hungry program!), we look at some clever ways of getting more RAM.

Disk expansion

My first Macintosh came with a 20Mb hard disk. As I kept running out of disk space, I spent a lot of time swapping files between the hard disk and floppies. I graduated to a machine with 160Mb, and then to one with over 300Mb. However, even with all this, like many other Mac owners, I run out of disk space. Each new version of an application is bigger than the last, and of course there's always more files and documents you couldn't possibly throw away...

One solution is to keep buying bigger hard disks. Another, and cheaper, option, is to try one of the clever programs which enable you to cram more on to your hard disk. These don't actually increase your disk space – even with the cleverest programming in the world, there's a physical limit to how much data any given medium can store. Instead, they simply compress your data so that it takes up less space.

How compression actually works need not concern us – in a nutshell, so long as you get the same data out again when you decompress it, and so long as any applications programs you're running can find the data files they're looking for in a form they can recognise, the techie details are unimportant. But it helps to be aware that disk expansion software comes in two forms: file level compression and driver level compression. The first shrinks individual files when they are not in use (the way files are chosen for compression varies from product to product), and then when an application opens a file, it is expanded. All this should happen invisibly, though you may be aware of a lag in opening some files. It is often possible to configure such compressors to specify that some files or folders should not be compressed.

Driver level compression will attempt to compress all data before it is written to disk, and therefore will have to expand all data coming from the hard disk. Driver level compressors can also change the way files are stored on disk. For example, the System may allocate a block to a file but not use the whole block – if a 2K file is put in a 4K block, then 2K is wasted. Driver level products can make use of this wasted 2K for another file. They may also allocate disk space to cut down on the amount of file fragmentation.

Which kind of compressor should you choose? Well, that depends why you need more disk space. In some areas, say multimedia applications, there is a need for immediate access to large files. All the packages mentioned here slow down file access in some way and therefore may not be suitable in such areas – you may get glitches in your sound or video playback. If your disk drive is not big enough to get the files on to it that you need to do some task, then you may well need a bigger disk drive. If you have a PowerBook, though, the cost of a new disk drive may be prohibitive...

Most people, however, won't be using all the files on their disk drive at the same time. Therefore, if some files could be made to take up less space when not needed but still expanded quickly when required, the effect would be as good as a bigger hard disk. All the products here work well in this scenario.

The other major use of compression is to create archives. These are files which contain other files compressed as much as possible, which therefore can be distributed more easily, either on-line or on disk, like the MACFORMAT cover disk – archiving enables us to squeeze more goodies on for you to enjoy. Archives can also be useful for taking collections of files that you know you won't need, but still want to keep, and storing them on floppies or AppleShare volumes. Now, as they say, read on...

File Level Compression

All the file level compression programs we looked at are simple to install and need roughly 300K in use. All can work in three ways. The first is background compression: the software looks for files that can be compressed when the machine is idle. Files are expanded when accessed and may be recompressed either when the file is no longer accessed or when the machine is idle again. In all cases it is possible to set various criteria for when a file should be compressed, usually based on whether or not it has been modified within a specified time period – if you're working on something, you don't want it being compressed and decompressed under you. It is also possible to exempt files from being compressed, usually on the basis that they're in a named folder or have a particular label. All the file level compression packages automatically exclude the System Folder from compression as this could cause problems.

The second way of using the compressors is on-demand compression: you can instruct the program to compress a file or folder immediately. Usually all this takes is choosing a menu item. The third way to use file compression is to create archives. Most of the archiving parts included the ability to create self-extracting archives (SEA files) and break large archives into segments to fit them on to disks.

The performance of any file system can be improved in a number of ways. A common method is to use a cache. This is a piece of memory where information from recently-accessed files is kept even if the application that wanted them has finished with them. If they are then asked for again, they can be fetched from the memory rather than the disk, which will be a great deal faster. The Mac's System already operates a file cache which is controlled from within the **Memory** Control Panel. Some of the packages reviewed here also operate a cache which can improve performance. The System's file cache will then contain compressed files and the product's cache expanded files. The performance improvement provided by a cache is always hard to quantify (like their treasure-containing namesake, they are meant to be hidden) but they should help with operations on small files.

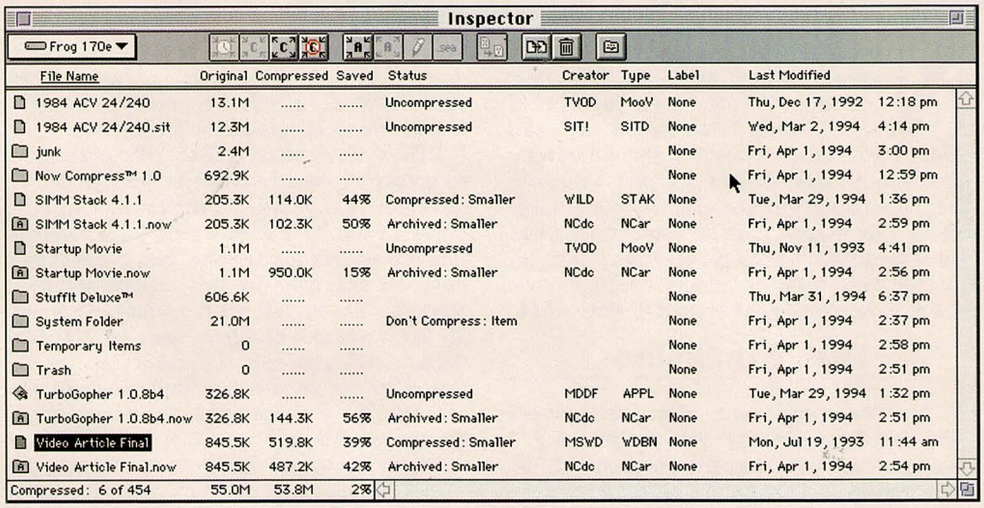
One thing to watch for with file based compression is how it works with AppleShare. If a file based compressor is installed on an AppleShare server or compressed files are shared using personal file sharing under System 7, then any 'client' will see compressed files. To expand files, the client will either need the compression software installed as well or a separate expanding application.

Now Compress

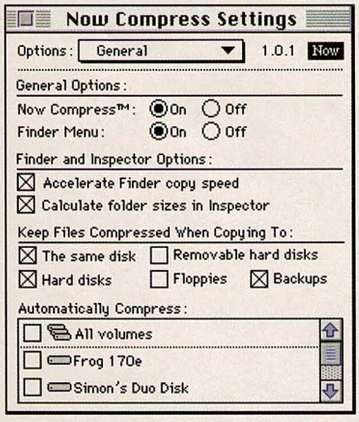
This is a recent addition to the collection of utilities produced by Now which includes various desktop tools and system enhancers. All of *Now Compress's* facilities are accessed via a menu and a single Control Panel. Of all the products, it had the largest set of options to control when files and folders could or should not be compressed. *Now Compress* offers two levels of compression: one gets the files smaller; the other compresses them faster. There is also an extremely useful browser facility called the *Inspector* which you can use to navigate through the file system, checking attributes of files and performing operations upon them.

You can also compress files on demand using a menu item or by dragging them on to a desktop icon. *Now Compress* also includes the ability to convert a wide variety of other files, including all those produced by the other products here. A cache is also available that should speed up some operations.

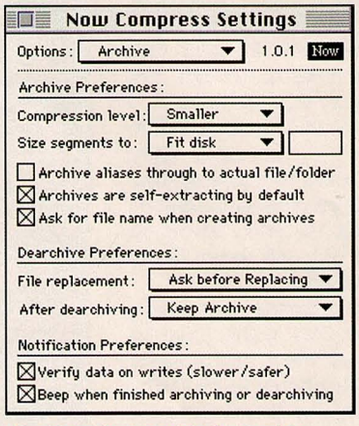
Now Compress produced the smallest files when compressing, though its archives were not the smallest. It should also be noted that it was not the fastest when compressing or expanding files and in particular was slowed down by the *QuickTime* movie.


Inspector
Frog 170e
File Name | Original | Compressed | Saved | Status | Creator | Type | Label | Last Modified
1984 ACV 24/240 13.1M .... Uncompressed TVOD MooV None Thu, Dec 17, 1992 12:18 pm
1984 ACV 24/240.sit 12.3M .... Uncompressed SIT! SITD None Wed, Mar 2, 1994 4:14 pm
junk 2.4M .... None Fri, Apr 1, 1994 3:00 pm
Now Compress™ 1.0 692.9K .... None Fri, Apr 1, 1994 12:59 pm
SIMM Stack 4.1.1 205.3K 114.0K 44% Compressed: Smaller WILD STAK None Tue, Mar 29, 1994 1:36 pm
SIMM Stack 4.1.1.now 205.3K 102.3K 50% Archived: Smaller NCdc NCar None Fri, Apr 1, 1994 2:59 pm
Startup Movie 1.1M .... Uncompressed TVOD MooV None Thu, Nov 11, 1993 4:41 pm
Startup Movie.now 1.1M 950.0K 15% Archived: Smaller NCdc NCar None Fri, Apr 1, 1994 2:56 pm
StuffIt Deluxe™ 606.6K .... None Thu, Mar 31, 1994 6:37 pm
System Folder 21.0M .... Don't Compress: Item None Fri, Apr 1, 1994 2:37 pm
Temporary Items 0 .... None Fri, Apr 1, 1994 2:58 pm
Trash 0 .... None Fri, Apr 1, 1994 2:51 pm
TurboGopher 1.0.8b4 326.8K .... Uncompressed MDDF APPL None Tue, Mar 29, 1994 1:32 pm
TurboGopher 1.0.8b4.now 326.8K 144.3K 56% Archived: Smaller NCdc NCar None Fri, Apr 1, 1994 2:51 pm
Video Article Final 845.5K 519.8K 39% Compressed: Smaller MSWD WDBN None Mon, Jul 19, 1993 11:44 am
Video Article Final.now 845.5K 487.2K 42% Archived: Smaller NCdc NCar None Fri, Apr 1, 1994 2:54 pm
Compressed: 6 of 454 55.0M 53.8M 2%

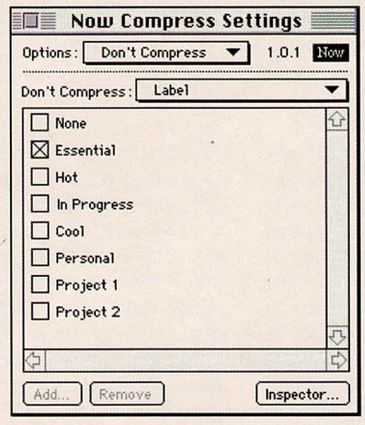
Now Compress's 'Inspector' is a useful browser facility which enables you to look at a disk, seeing what is compressed and carrying out various operations with a minimum of effort using the easily-accessed icon bar at the top of the window.



Most of the settings are obvious. **Accelerate Finder copying** prevents files being expanded when copying between compressed disks.

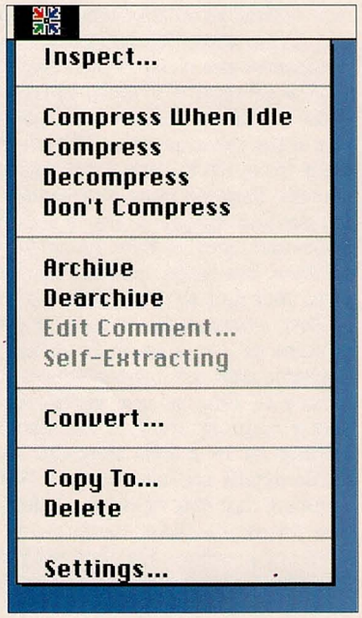

Now Compress Settings
Options: Archive 1.0.1 Now
Archive Preferences:
Compression level: Smaller
Size segments to: Fit disk
Archive aliases through to actual file/folder
Archives are self-extracting by default
Ask for file name when creating archives
Dearchive Preferences:
File replacement: Ask before Replacing
After dearchiving: Keep Archive
Notification Preferences:
Verify data on writes (slower/safer)
Beep when finished archiving or dearchiving

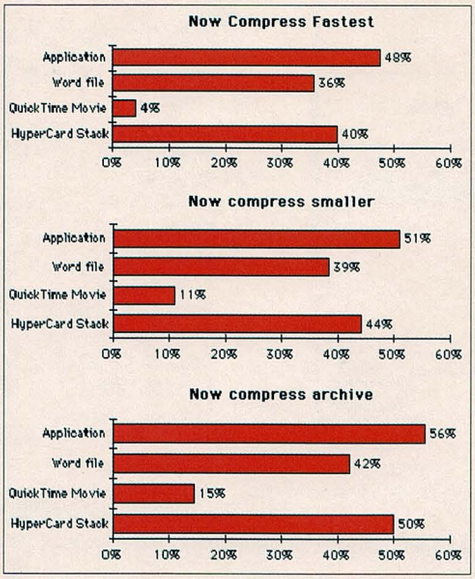
You can configure settings for creating archives, including those for what happens to the files when the archive is expanded.



There are various possibilities for stopping automatic compression. By default, it will not compress files in the System Folder.

All of *Now Compress's* functions are accessible through a single menu. The Settings option opens the Control Panel shown.





These tables show the amount of space saved for our sample files. (For details of our tests, see the box at the right.)

The tests

All our tests were performed on the same machine: a docked Duo 230 with 8Mb memory and no Floating Point Unit. All timings relate to a Frog 170e, a reasonably fast 170Mb disk which was kindly lent for our tests by Frog Systems (tel: 0738 440218). This was attached to the Dock along with two other drives and a CD-ROM player. The Duo was running System 7.1.1 with a healthy collection of commercial, shareware and public domain Extensions. The Duo 230 in this configuration is roughly twice the speed of a IIsi/LCII and about the same speed as an LCIII.

Each product was tested individually, and it's worth noting that none of them conflicted with any of the Extensions or applications used during the test. All of them work under System 6, though some functions required System 7.

For the file compression products, we compared times for compressing and expanding four files: an application; a large Microsoft *Word* file containing a number of pictures; a *QuickTime* movie; and a *HyperCard* stack (the actual sizes are unimportant; it's relative results that count). These files were chosen for various reasons: an application contains different sorts of data; a *QuickTime* movie is already compressed in various ways; the pictures in the *HyperCard* stack and the *Word* file should compress well. For all products, we tested all the different compression techniques and archiving facilities.

NOW COMPRESS

Price £81, from Frontline distribution, 0256 20534.

Ease of use 90%
Good, with all features accessible from menu or Control Panel, though it is fiddly to use.

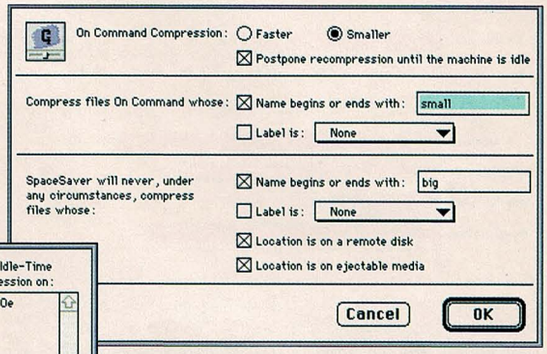
Documentation 90%
Good manual.

Features 95%
Everything you could want!

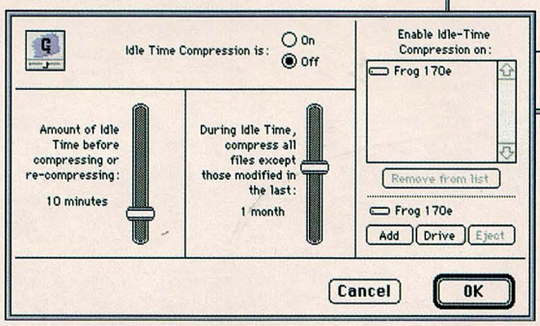
Value for money 95%
An excellent bundle for the money.

MACFORMAT RATING 92%

The compression options are simple to understand and set. The 'on command' compress by file name or label is particularly useful.


On Command Compression: Faster Smaller
Postpone recompression until the machine is idle
Compress files On Command whose: Name begins or ends with: small
Label is: None
SpaceSaver will never, under any circumstances, compress files whose: Name begins or ends with: big
Label is: None
Location is on a remote disk
Location is on ejectable media
Cancel
OK

Idle time options are simple to set. You can also use the program to translate BinHex, MacBinary, UUCode and other formats.



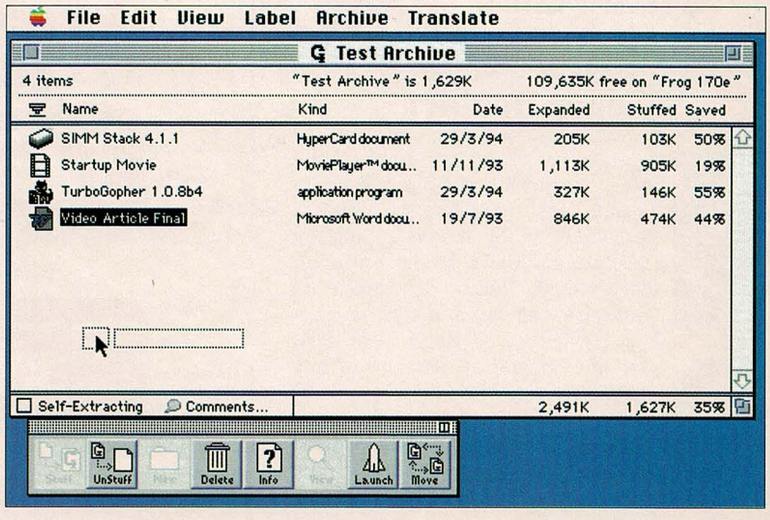
StuffIt Deluxe

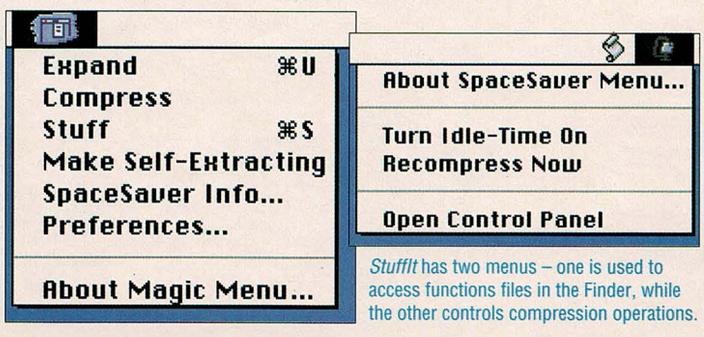
StuffIt is one of the oldest names in Macintosh file compression, originating as a shareware file archiving program whose current version is called *StuffIt Lite*. This version consists of two parts: *StuffIt SpaceSaver* (which is available separately) performs compression in the background or on demand, and there is a separate application which handles archives. All the *SpaceSaver* functions are available via two menus. Compression can be optimised for speed or size. You can control whether something is compressed or not according to labels (give an item one label and it will be compressed; give it another and it will never be compressed) or by name (if a filename ends with a given word, like 'small', it will be compressed).

SpaceSaver has a particularly useful facility by which if you change a filename, an automatic operation can follow. For example, adding a '.sit' extension to a folder will create a new *StuffIt* archive containing the contents of that folder. However, changing compression on a file by file basis is fiddly and there is no browser to see what files are compressed. Also, there is no cache facility, which means this may not work as well as the other products. The *StuffIt Deluxe* application provides a reasonable method of creating and maintaining archives. It has the widest set of import options of any of the products here, plus the ability to encrypt archives.

StuffIt SpaceSaver files were produced very quickly using the faster setting, though the savings were not as good as with *Now Compress*. However, *SpaceSaver* did not compress the QuickTime movie using either strategy. The

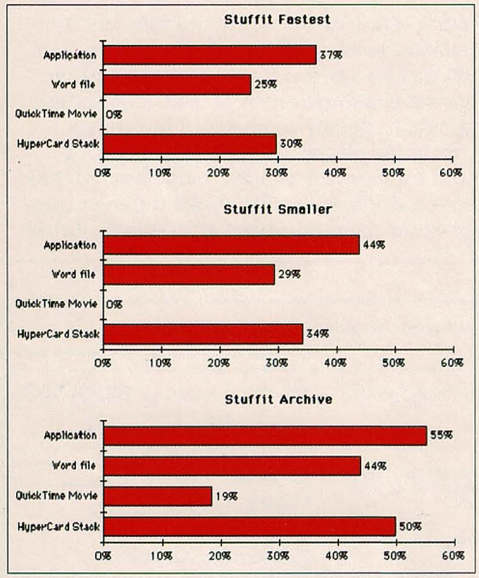
The *StuffIt* application has a useful drag-and-drop facility – drag files on to the icon bar to perform operations such as decompressingor deleting a file.


File Edit View Label Archive Translate
Test Archive
4 items
"Test Archive" is 1,629K
109,635K free on "Frog 170e"
Name Kind Date Expanded Stuffed Saved
SIMM Stack 4.1.1 HyperCard document 29/3/94 205K 103K 50%
Startup Movie MoviePlayer™ docu.. 11/11/93 1,113K 905K 19%
TurboGopher 1.0.8b4 application program 29/3/94 327K 146K 55%
Video Article Final Microsoft Word docu.. 19/7/93 846K 474K 44%
Self-Extracting Comments...
2,491K 1,627K 35%
UnStuff Delete Info Launch Move

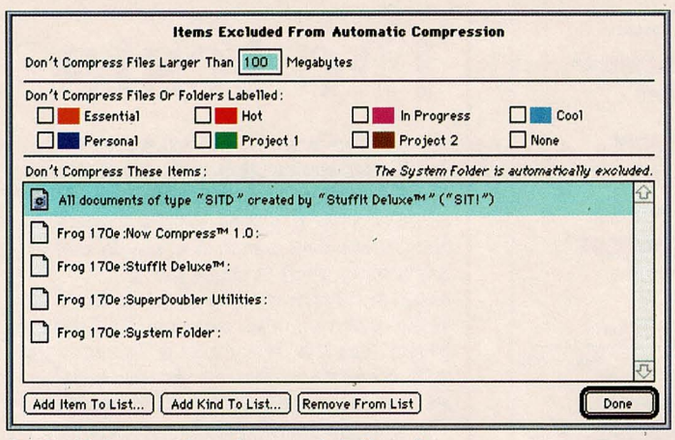


StuffIt has two menus – one is used to access functions files in the Finder, while the other controls compression operations.

SpaceSaver was also very fast when expanding. The lack of a browser makes the management of compressed files quite difficult, and there are not many options to exclude files from compression. It is not, for example, possible to exclude all *Word* files. However, *StuffIt's* real strength is as an archiving program. It is the only application which understands all the major formats in use on other systems and can encrypt files.



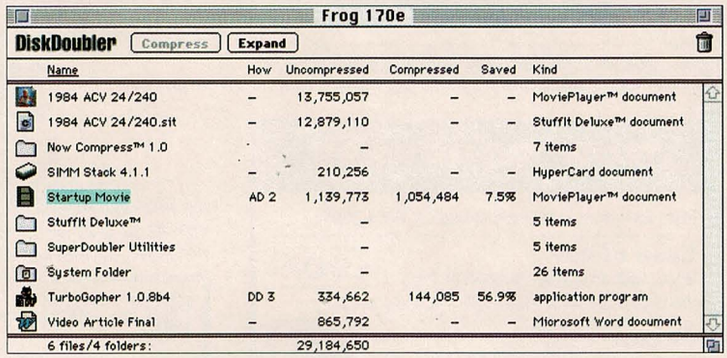
StuffIt Deluxe has all the options: do you want to save fast or end up with a very small file? The table shows space saved.



AutoDoubler has extensive options to exclude files and folders from automatic compression.

The *DiskDoubler* menu provides access to various compression and archiving options.

The *DiskDoubler* browser provides instant information on what is compressed and how it was compressed.


Frog 170e
DiskDoubler Compress Expand
Name How Uncompressed Compressed Saved Kind
1984 ACV 24/240 – 13,755,057 – – MoviePlayer™ document
1984 ACV 24/240.sit – 12,879,110 – – StuffIt Deluxe™ document
Now Compress™ 1.0 – 7 items
SIMM Stack 4.1.1 – 210,256 – – HyperCard document
Startup Movie AD 2 1,139,773 1,054,484 7.5% MoviePlayer™ document
StuffIt Deluxe™ – 5 items
SuperDoubler Utilities – 5 items
System Folder – 26 items
TurboGopher 1.0.8b4 DD 3 334,662 144,085 56.9% application program
Video Article Final – 865,792 – – Microsoft Word document
6 files/4 folders: 29,184,650

STUFFIT DELUXE

£81 from Principal, 0706 831831; StuffIt SpaceSaver available separately

Ease of use 80%
Generally good but does not provide very good control of compression.

Documentation 80%
Adequate.

Features 85%
The archiving program is the best here but SpaceSaver could be better.

Value for money 90%
Very good value for what you get.

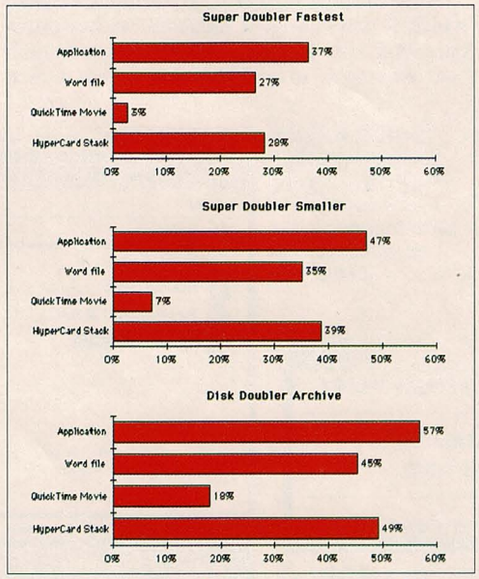
MACFORMAT RATING 83%

Super Doubler

SuperDoubler is not one product but three, bundled together: a background file compression product (*AutoDoubler*), an archiving program (*DiskDoubler*) and a Finder enhancer (*CopyDoubler*) which can speed up Finder file copying and trash emptying. Previously, all three have been available separately, but now only *AutoDoubler* can be bought on its own. *SuperDoubler* provides five levels of file compression, again optimised for speed and space. Two levels are supported by the *AutoDoubler* part and can be used for 'transparent' compression, while the other three are only available in *DiskDoubler* for archives. It seems that the faster *AutoDoubler* option is only available for on-demand compression: *AutoDoubler* will convert such files to the smaller version when the machine is idle.

AutoDoubler provides a wide range of options to control compression and a cache for uncompressed files. One particularly handy feature: compressed files can have the corner of their icon tagged with 'DD' to indicate that they are compressed. The *DiskDoubler* provides all the options you expect of an archive program, including segmenting and self-extracting archives. The functions are not particularly well integrated into the Finder, though: certain operations cause the launch of an application. Also, certain functions such as file copying work better with *CopyDoubler* installed. *DiskDoubler* can also be used to browse volumes compressing and expanding files.

SuperDoubler produced the best results overall. Although its files were not the smallest, they didn't take the longest to produce and *SuperDoubler* was consistently faster at expansion than the other products. However, the split between the various parts is irritating, and when you compare *AutoDoubler* to the other stand-alone products here, it is not good enough by itself to buy separately.



Space savings using the *Super Doubler* programs. *Disk Doubler* – bottom chart – is the archiver part of the package.

SUPERDOUBLER

£105 from Amtech International, tel: 0202 476977. AutoDoubler alone: £69.

Ease of use 90%
The division between *AutoDoubler* and *DiskDoubler* can lead to confusion. It does not integrate with the System as well as the other products.

Documentation 95%
Good.

Features 90%
Everything you could want, particularly if you want *CopyDoubler* as well.

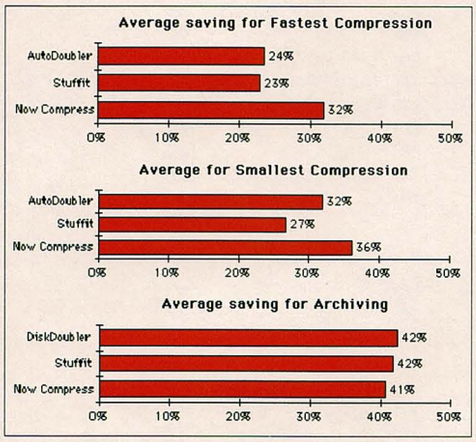
Value for money 85%
The complete package is a bit pricey.

MACFORMAT RATING 90%

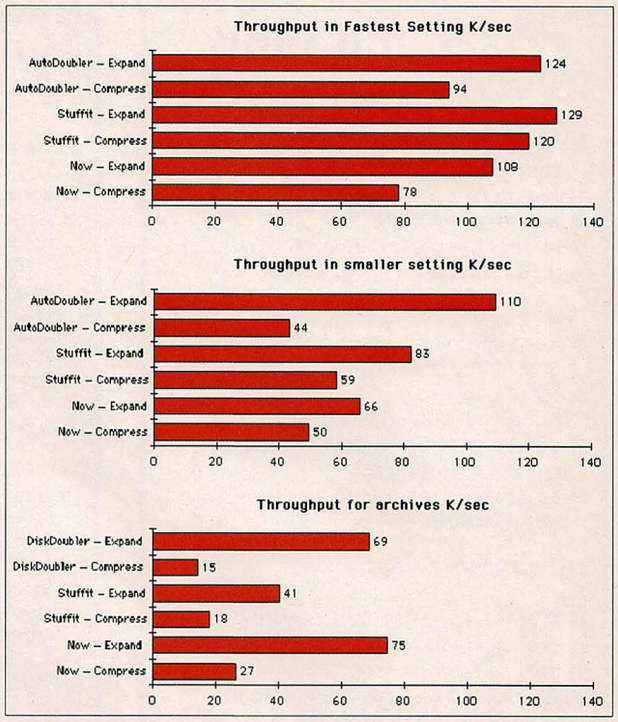
Finding a winner...

The choice between *Now Compress*, *StuffIt Deluxe* and *SuperDoubler* was never going to be easy. The tables show some average results for the degree of compression and throughput, but note that compression speed is not that important because this will generally occur when the machine is idle.

Overall, there's not much in it. *Now Compress* does seem slower than the other products, but it produces more compact files. On top of that it has more options (maybe too many?) and good documentation. *StuffIt* has the most translation options and a very simple interface. Its manual leaves a bit to be desired but it does have some features which the other products do not. *SuperDoubler* is very fast at expanding its own files but the lack of integration of its component programs is irritating. Its manual is very good, but it is the most expensive product.



These charts show the average saving for the file compression packages when used in fastest and smallest compression mode and when archiving.


Throughput in Fastest Setting K/sec
AutoDoubler – Expand 124
AutoDoubler – Compress 94
Stuffit – Expand 129
Stuffit – Compress 120
Now – Expand 108
Now – Compress 78
0 20 40 60 80 100 120 140
Throughput in smaller setting K/sec
AutoDoubler – Expand 110
AutoDoubler – Compress 44
Stuffit – Expand 83
Stuffit – Compress 59
Now – Expand 66
Now – Compress 50
0 20 40 60 80 100 120 140
Throughput for archives K/sec
DiskDoubler – Expand 69
DiskDoubler – Compress 15
Stuffit – Expand 41
Stuffit – Compress 18
Now – Expand 75
Now – Compress 27
0 20 40 60 80 100 120 140

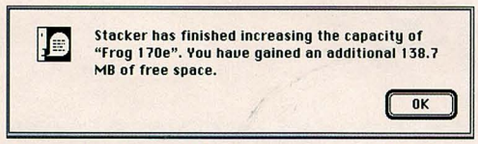
These charts give some idea of the speed of each compressor. They show the amount that each could compress and expand per second on the test machine. Remember that expansion speed is probably more important than compression speed, and actual performance may differ on your own Mac.

Driver Level Compression

Stacker

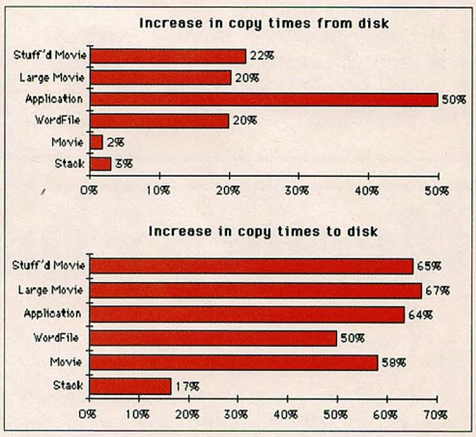
There is only one driver level compression package generally available for the Mac at the moment: *Stacker*. The installation process is simple, if time-consuming (it involves installing a new driver and compressing the files already on the disk). We tested *Stacker* using the same configuration as the file level compressors. Despite the software having to do more work, operations like launching an application or restarting the machine were slowed down by only about 5–10%. As you might expect, copying a file was slower, because it had to be compressed 'on the fly' – see the table at right.

We knew that file level compression might cause problems with multimedia appplications, so we tried playing a very large *QuickTime* movie off hard disk with *Stacker* installed. *QuickTime* requires good disk performance to maintain quality and sound/picture synchronisation. There were some subjective differences, the most peculiar of which was a truncated soundtrack, but the quality was adequate and the compression worked well.

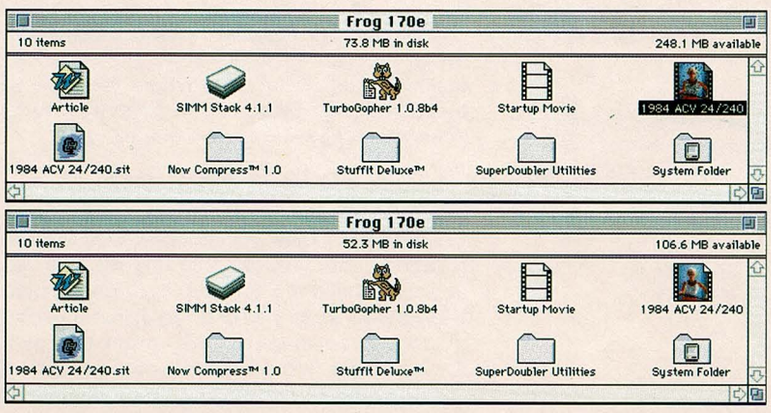


Once you have installed *Stacker*, the program helpfully lets you know how much space it thinks you have gained.

Part of the folklore is that driver level compression is more dangerous than file level compression. This can be true because the former means that the structures on the disk are different from those on normal disks, so disk utilities like *MacTools* or *Norton Utilities* cannot fix problems. We were not able to verify this during the test, but *Norton* was quite happy with the disk. Also, *Stacker* itself does contain substantial diagnostic programs to check out a disk. If *Stacker* itself goes wrong, however, you may end up in a lot of trouble, so if this prospect worries you, stick to file level compressors.



The benchmarks table shows the change in speed in copying files on to and off the disk with and without *Stacker*. You can see that the impact of *Stacker* on disk speed in this case is quite large, but the difference does not seem to show up in normal operation. The Stuff'd Movie file was a 12Mb *StuffIt* Archive of a 15Mb QuickTime movie (the file 'Large Movie').



With and without *Stacker*. The items on the disk are displayed as normal, which is what you want, but as you can see, the estimates of how much is on the disk and how much is remaining can be inaccurate – the same items now seem to take up an extra 20Mb!

STACKER

£92 from Stac Electronics, 0344 302900.

Ease of use Simple.	95%
Documentation Excellent.	95%
Features Has everything that is required of it.	95%
Value for money Great, but for the slight performance drop.	90%
MACFORMAT RATING	93%

Pros and Cons

File level compression

Pros

- More control – you can use it when you want it and set it to compress only certain files
- Includes archiving
- Should have less performance penalty than driver level compression

Cons

- Recompression required when your Mac is idle or the file is not in use
- More likely to cause compatibility problems with other software
- Cannot be used on the contents of your System Folder
- More obtrusive than driver level compression

Driver level compression

Pros

- Works on all files 'transparently'
- Less likely to conflict with System than file level compressors
- When used on a network, does not have to be installed on client Macs
- Should save more space than file level compressors

Cons

- Can slow up all file access, particularly on slower machines
- Cannot be turned off for certain files
- Problems recovering disks more likely in the event of a disk problem
- Requires separate archiving system

FILE LEVEL COMPRESSORS

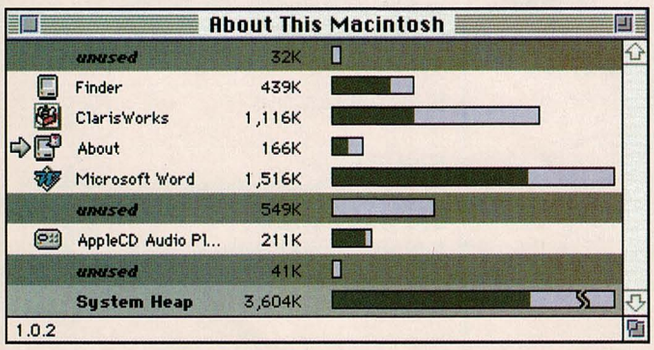
	NOW Compress	Stuffit Deluxe	SuperDoubler
Number levels of compression	2	3	5
Automatic Compression			
When idle	yes	yes	yes
On demand	yes	yes	yes
By disk	yes	yes	yes
Exclude files	yes (by name or label)	yes (by special name/label)	yes (by name or label)
Exclude folders	yes (by name or label)	yes (by special name/label)	yes (by name or label)
Exclude files by creator	yes	no	yes
Exclude files by type	yes	no	yes
Start at a time	yes	no	no
Start at shutdown	yes	no	no
Start when mouse in a certain position	yes	no	yes
On demand compression/expansion			
by Finder label	no	yes	no
by Name	no	yes	no
by Drag and Drop	yes	no	yes
Archiving			
Encryption	no	yes	no
Self extracting archives	yes	yes	yes
Decompression application	yes	yes	yes
Segment archives	yes	yes	yes
Miscellaneous			
Cache files	yes	no	yes
Can be used via AppleScript	no	yes	no
Different on-screen indicators	no	yes	no
Special Icon for compressed files	no	no	yes
Control when to recompress	yes	yes	no
Conversion			
Now	yes	no	no
Stuffit	yes	yes	yes
SuperDoubler	yes	no	yes
Others	no	yes	no

Memory Expansion

Every Mac owner has cursed at the dialogue box *'There is not enough memory available to open "foobar". Try closing a desk accessory or quitting another application'*. And every Mac owner has thought: 'I don't want to quit another application. There's 8Mb of memory there – why don't you make better use of it?' In fact the Macintosh System is not very good at making use of memory.

Of course, you could just swallow your pride and do what the dialogue box says. The best solution is to buy more RAM – it's easy to fit yourself to most Macs (learn how next issue) and only about £30 a Megabyte – but that is still quite expensive. There are cheaper alternatives: virtual memory and two software solutions. But to understand how they can help, we need to look at what the problem is all about.

When you start up your Mac, the System and various Extensions and Control Panels are all loaded into RAM (Random Access Memory). The space they take up is called the System Heap. The Finder is then loaded at the top of memory, and all the space between the top of the System Heap and the Finder is available for you to run applications. Some of these applications may even add things to the System Heap, causing it to get bigger.



A classic case of memory fragmentation – the *CD Player* is breaking up a large piece of memory, stopping it all being used because applications programs can only launch into a solid block of memory.

Take as an example an 8Mb Mac with a System that occupies 2.5Mb. Launch first *Excel* and then Microsoft *Word*, and say that each takes 2Mb. You now want to run *Photoshop* as well, which needs 3Mb. To make space, you quit *Excel*. This leaves 3.5Mb free, which should be enough space, but *Photoshop* still will not launch. The reason is that memory is 'fragmented' – part of the free memory is 'above' *Word*, part 'below', but applications need memory in one unbroken block. To run *Word* and *Photoshop* together you will have to quit *Word* first and then launch *Photoshop* and *Word* again.

Unfortunately this problem cannot be fixed properly by a third party – it needs Apple to change the way the Macintosh System works. What you can do is get around it, either by making better use of the memory you have or by adding more memory – or even by making your Mac *think* it has more memory.

Virtual Memory

You may have both *Word* and *Excel* open at the same time, but you can only interact with one at a time. Even if a program is running in the background while you're doing something else, it can only do so much. This means that parts are not in use. What happens when you switch on virtual memory (using the **Memory** Control

Panel) is that these unused parts are swapped to disk, freeing up memory for parts of applications that are working.

As far as the application is concerned, it sees memory – it cannot tell the difference between virtual and real memory. However, this means it will try to use the parts that are on disk, not sitting in memory waiting to be called on, and it must be able to do so without realising anything has changed. To make this work, Macs have a special piece of hardware called the Memory Management Unit (MMU) which keeps track of what areas of memory have been switched on to disk (in technical language, it maps the virtual memory addresses to real memory addresses). The MMU was a separate chip in 68020-based Macs (the original Mac II and LC) but it is part of the 68030, 68040 and PowerPC chips found in newer Macs. Unfortunately, there is no MMU for the 68000 chip and therefore virtual memory will not work with very old Macs such as the original Mac Plus, SE, Classic or PowerBook 100..

If an application calls on something in virtual memory – that is, something that is not in real memory but on disk – the System then copies this from disk into memory. Obviously, this may fill up memory, in which case something from memory will have to be moved out to disk. It is this copying between disk and memory that slows down your Mac when you're using virtual memory, and it is the disk activity that makes virtual memory a problem on PowerBooks.

Jargon Busting

Archive: a file that contains other files compressed as small as possible.

Background compression: means that files are compressed when your Mac is idle, so the process doesn't interrupt your work.

Block fragmentation: when only part of a disk block is used. Writing 1K to an 8K block wastes 7K of space.

Disk cache: an area of memory which contains data recently accessed from disk. If the application requests the data again, that data can be read much more quickly than if it had to be fetched from disk again.

File fragmentation: when you save a file to disk, the data is written wherever there happens to be room for it. On a freshly-formatted empty disk, files may be saved neatly one after another, but once you start deleting files or adding to old ones, data will be saved in pieces scattered all over the disk. This can slow up file access.

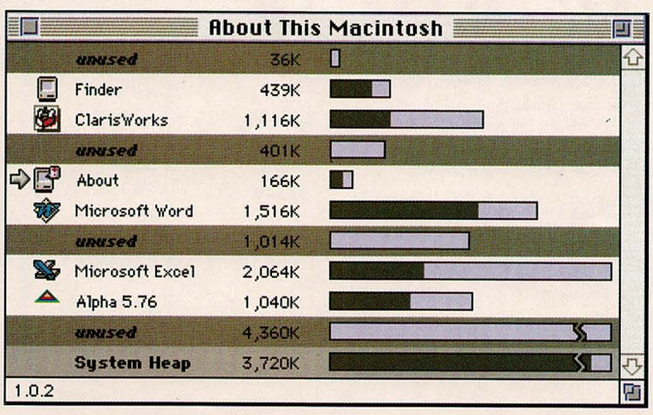
Transparent compression: file level and driver level compressors are transparent because when accessing a file they are not 'seen'; archiving is not transparent – you have to sit and wait for it to finish!

RAM Doubler

Select '**About This Macintosh**...' in the **Apple** menu and you'll notice in the display that each application's bar chart has a dark area (the memory actually being used) and a light area. This means that applications are allocated space they are not using – the light part of the bar. If this is the case, then why not use this memory for another application? This is the first trick that Connectix *RAM Doubler* uses. Again it uses the MMU to make this work, so that one application does not interfere with another. However, there will come a point when this cannot be continued. It is at this point where virtual memory would swap something to disk, but disks are slow compared with real RAM. So instead, *RAM Doubler* compresses an unused part of an application to make more space. This can create a lot of space, since on average data can be compressed to about 40% of its original size. However, this can only continue for so long, and finally *RAM Doubler* also swaps data to disk like virtual memory. However, it only swaps compressed memory, which is quicker than swapping uncompressed memory. Again, there will come a point where some data which is required is not accessible in RAM. If *RAM Doubler* is lucky, it can just expand it, but it may have to swap it in from disk. All this should make *RAM Doubler* faster and more efficient than virtual memory.

It is hard to believe that Apple's virtual memory and *RAM Doubler* work by similar mechanisms. Both work best with 32-bit addressing turned on and there are some old applications that don't like virtual memory, but the difference in performance is phenomenal. Virtual memory slows a machine down by about 25–30% on operations that can be timed – see the timing table. Further simple operations – like swapping between two large applications, one with its windows hidden – can take what seems like an age and prompt huge amounts of disk activity. With *RAM Doubler*, everything changes. Timings show that the machine has slowed down by only about 5%, which is very hard to detect. With less disk activity, *RAM Doubler* is much more suitable for use on PowerBooks than Virtual Memory.

Disadvantages? Not many. What *RAM Doubler* gives you is not real memory – if you want to run an application which needs 8Mb, you will still need a machine with more than 8Mb of real RAM in it. There may be compatibility problems, though we didn't experience any and in any case these will be no worse than using virtual memory. You need 4Mb or more of memory to use it, and it works better with 8Mb or more because it has to use the disk drive less. So, if your Mac can support virtual memory, has more than 4Mb in it and runs System 6.0.5 or better, then get *RAM Doubler*.



With *RAM Doubler* in action you can run many more applications at once, though you can still have memory fragmentation. However, despite this, there is still free space to launch applications into.

RAM DOUBLER

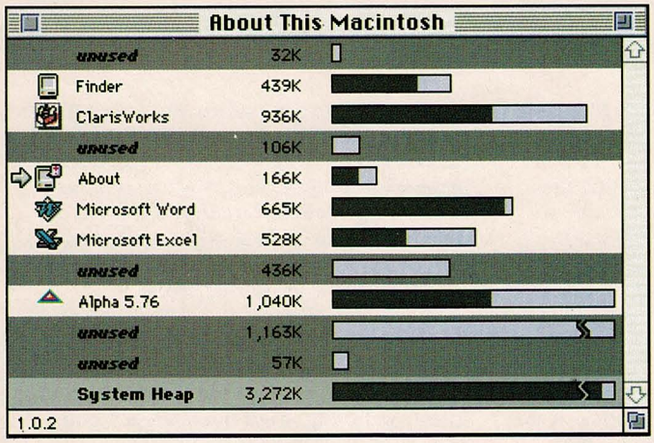
£82 from Computers Unlimited, tel: 081 200 8282.

Ease of use Just an Extension, which is simply installed.	95%
Documentation The brief manual tells you everything you need to know.	90%
Features Spectacular, but it doesn't *treble* your RAM.	96%
Value for money A good deal cheaper than buying SIMMs!	95%
MACFORMAT RATING	96%

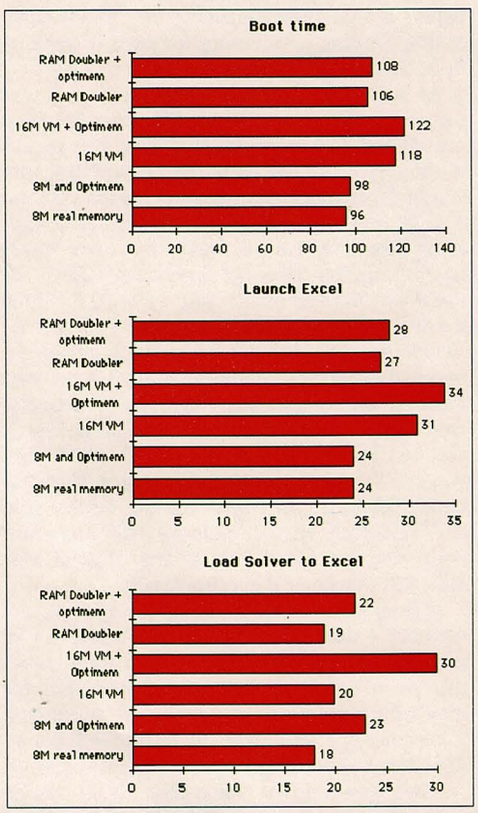
OptiMem

Under System 7 when you highlight an application and select **Get Info** in the **File** menu, the details displayed include a section on Memory. System 7.0 displays Suggested Size and Current Size; 7.1 has Suggested, Minimum and Preferred sizes. These enable you to allocate how much memory an application will be launched into – within limits: you can't normally select an amount below the minimum that the application will accept, but this should be enough to load it and perform some simple tasks. *OptiMem* is an Extension that takes over some of this memory management. For a start, it always tries to launch applications in the minimum amount of memory. When an application is running, although it is given an amount of memory, it does not usually organise it by itself – it asks the System for help. When this happens, *OptiMem* does not allocate space within the application's partition but in an area shared with other applications. You can see the result in the **About This Macintosh**... display: the light part of each application's bar, showing memory which is not being used and is therefore wasted, becomes quite small.

OptiMem's tricks require it to know some-



In use, *OptiMem* launches applications into smaller partitions, with applications using space near the System Heap. This can be seen with the break in the 'unused' space.


Boot time
RAM Doubler + optimem 108
RAM Doubler 106
16M VM + Optimem 122
16M VM 118
8M and Optimem 98
8M real memory 96
0 20 40 60 80 100 120 140
Launch Excel
RAM Doubler + optimem 28
RAM Doubler 27
16M VM + Optimem 34
16M VM 31
8M and Optimem 24
8M real memory 24
0 5 10 15 20 25 30 35
Load Solver to Excel
RAM Doubler + optimem 22
RAM Doubler 19
16M VM + Optimem 30
16M VM 20
8M and Optimem 23
8M real memory 18
0 5 10 15 20 25 30

These charts show how long certain operations took when running different memory expansion strategies. The restart time and time to launch *Excel* gives a general guide – note the effect of virtual memory. *The Solver* is an add-in to *Excel* which has to be loaded separately. This shows the effect of *OptiMem* as it allocates memory in the System Heap.

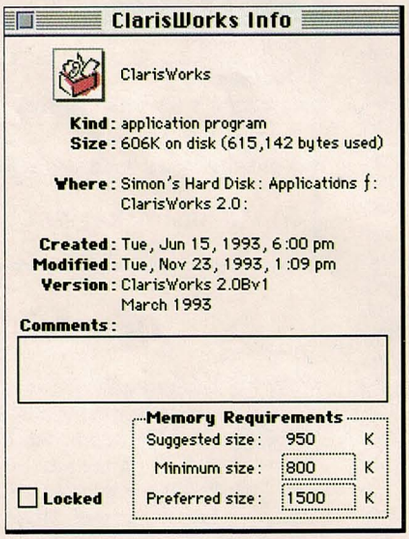
thing about how each application works. It already contains knowledge amount some applications and learns about others as they are used. Not all applications can work with *OptiMem* and others do not work well – they slow down or make excessive use of the disk. The manual has some advice on how to get round this but it requires some fiddling to get right. What *OptiMem* does is give you much finer control over memory. Even with *RAM Doubler* installed, memory can run out and fragmentation can occur; with *OptiMem* this is much less likely to occur.

OptiMem works on any Mac with System 7 and can work with virtual memory as well. It will also provide the same saving whether the Mac is running in 24-bit or 32-bit mode. However, it does not gain as much space as *RAM Doubler* does and is harder to use.

Interestingly, you can use these memory expanders together, so we tried *OptiMem* with Virtual Memory and with *RAM Doubler*. However, there comes a point where the two start to compete for memory management time. When working by itself, *OptiMem* warns the user by flashing an icon over the **Apple** menu when it starts to run out of memory. But that's the point where *RAM Doubler* by itself starts compressing memory and swapping things to disk. When you're running both of them, these two strategies seemed to interact badly – our test machine became very slow. So better run one or the other. Running both works but not well enough.

Both of these products use bit of a magic to make memory management better. *RAM Doubler* is easy to work with and therefore deserves the highest commendation. If you want to run more applications, do not want to buy more memory and your Mac can support virtual memory, then get *RAM Doubler*. *OptiMem* is also clever but is fiddly to use, and at the end of the day it does not do as well as *RAM Doubler*. But both will give you more RAM out of thin air!

A **Get Info** box showing how System 7.1 enables you to configure an application program's memory requirements.


ClarisWorks Info
ClarisWorks
Kind: application program
Size: 606K on disk (615,142 bytes used)
Where: Simon's Hard Disk: Applications ƒ: ClarisWorks 2.0:
Created: Tue, Jun 15, 1993, 6:00 pm
Modified: Tue, Nov 23, 1993, 1:09 pm
Version: ClarisWorks 2.0Bv1 March 1993
Comments:
Memory Requirements
Suggested size: 950 K
Minimum size: 800 K
Preferred size: 1500 K
Locked

OPTIMEM

US$129 from Jump Development Group, Pittsburgh, PA, USA, tel 0101 412 681 2692.

Ease of use 80%
Fiddly to configure and break in new applications.

Documentation 90%
Manual tells you everything you need to know.

Features 90%
It is very clever but...

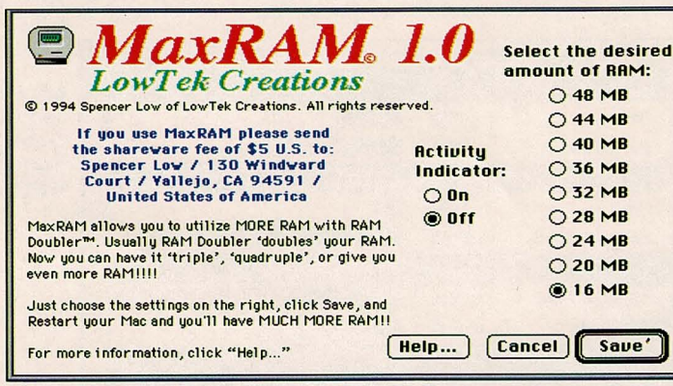
Value for money 80%
On the basis of the US price, it is not particularly good value for money.

MACFORMAT RATING 85%

What about RAM Trebler then?

Why does *RAM Doubler* only double your memory when Apple's Virtual Memory lets you have many times more? The reason is a simple rule of thumb that has developed over a number of years: virtual memory becomes inefficient if the amount of real memory is less than half the required virtual memory.

However, *RAM Doubler* can be made to go bigger, and it seems that Connectix did try to make this work – there is a resource in *RAM Doubler* called 'pref' which contains some information about how much to expand the memory, and you can read this if you open a copy of *RAM Doubler* with *ResEdit*. You needn't do that, however: there is a shareware application called *MaxRAM* which will change the resource for you. It will also turn on a small indicator which flashes a little light in the top left of the screen when *RAM Doubler* is working. It works, but nothing in this world is free – you need to buy *RAM Doubler* first, and then quadrupling your RAM with *MaxRAM* is going to cost you a shareware fee of US$5. Outrageous, isn't it?


MaxRAM® 1.0
LowTek Creations
© 1994 Spencer Low of LowTek Creations. All rights reserved.
If you use MaxRAM please send the shareware fee of $5 U.S. to:
Spencer Low / 130 Windward Court / Vallejo, CA 94591 / United States of America
MaxRAM allows you to utilize MORE RAM with RAM Doubler™. Usually RAM Doubler 'doubles' your RAM. Now you can have it 'triple', 'quadruple', or give you even more RAM!!!!
Just choose the settings on the right, click Save, and Restart your Mac and you'll have MUCH MORE RAM!!
For more information, click "Help..."
Activity Indicator:
On
Off
Select the desired amount of RAM:
48 MB
44 MB
40 MB
36 MB
32 MB
28 MB
24 MB
20 MB
16 MB
Help...
Cancel
Save'

What the *MaxRAM* application can do to *RAM Doubler*. Not bad for $5 (plus postage)...

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Now the future of power computing is totally convincing with Claris software.

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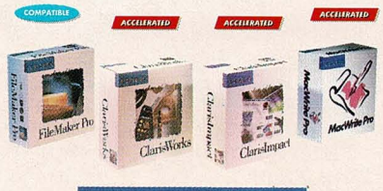

CLARIS

Claris International, Inc. 1 Roundwood Avenue, Stockley Park, Uxbridge, Middlesex UB11 1BG. Telephone: 081 756 0101. Fax: 081 573 4477.

MACFPPC694

*There will also be a free window of 30 days from the time each of the above products ships, so that you may upgrade. Proof of purchase of a Power Macintosh, in the form of a receipt or an invoice, will be required before you can purchase a Claris Power Macintosh upgrade.

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Child's play

If you're after a user-friendly and – dare we say it – fun publishing package, then *Print Shop Deluxe* could be just what you're looking for.

Desktop publishing is all about serious, heavyweight packages, right? Well, no. This month we take a look at a product that's very much positioned at the fun end of DTP – *Print Shop Deluxe*.

We touched briefly on the original *Print Shop* package back in MACFORMAT 3, where we noted that, in some ways, the program harked back to the Mac's equivalent of the stone age. In fact, the only reason it was mentioned at all was that it still relied on the bitmapped fonts which came with the first generation Macs – they call them 'Apple Classic' fonts or somesuch these days – and it was useful to demonstrate just how much digital fonts had improved over the years. This updated version, however, has plenty to recommend it.

Although there are a number of other improvements in *Print Shop Deluxe*, the most important – and the one that's made many of the others possible – is the switch to more sophisticated font technology. The new package will work with both TrueType and PostScript fonts, and even comes bundled with a useful suitcase of 30 varied TrueType fonts (see panel) which some people may find justifies at least part of the purchase price on it own.

If you look at the screenshots dotted around the page you'll get a good idea of what the package can do. Most of them are fairly self-explanatory, but here's a brief run-down on what it's all about...

Deluxe features

Print Shop Deluxe is a limited-capability DTP package which is dedicated to five types of task or 'project' – greetings cards, signs, banner, letterheads and calendars. In each of these you can combine headlines and running text, graphics from supplied libraries, styled borders and lines. Each type of project has its own library of preset designs into which you may place your choice of graphics and text, or you can opt to start with a blank grid and build your own design from scratch.

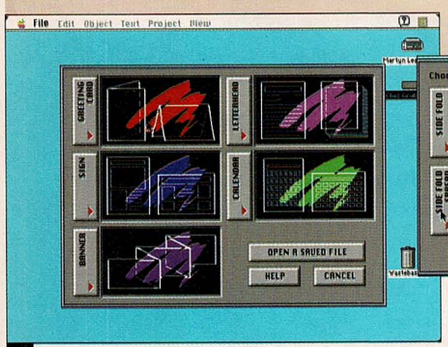
The graphics come in four main flavours: backdrops (both portrait and landscape – there

BAZOOKA
Boulder
Calligrapher
Chaucer
FILLMORE
Heather
Jester
Librarian
Moderne
New Zurica
New Zurica bold
New Zurica oblique
Palatia
Palatia bold
Palatia italic
Paramount
Paramount bold
Paramount italic
SCRIBBLE
Sherwood
Signature
Stagecoach
STANDOUT
STEAMER
Stylus
Subway
Tribune
Tribune bold
Tribune italic
Tubular

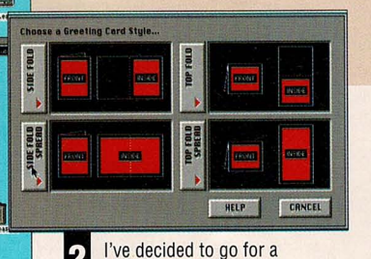
Ever had that old "Face rings a bell, but I can't put a name to it" experience? It happens quite a lot with typography too and, as you can see from the list above, there are a few old friends making their appearances under curious aliases in this useful selection of 30 TrueType fonts supplied with *Print Shop Deluxe*. Even better news is that the program will also happily make use of any TrueType and PostScript fonts already installed on your Mac – a huge leap forward from the old Apple bitmap fonts supplied with the original *Print Shop*.

IN THE PRINT SHOP

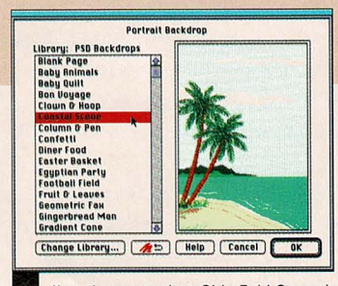
Creating your document in *Print Shop Deluxe* is a simple step-by-step process...



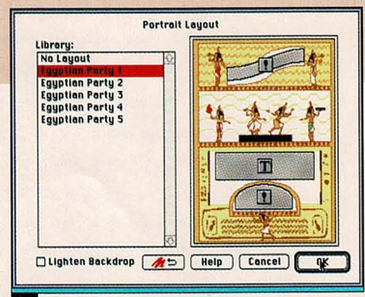
1 When you want to start a new document in *Print Shop Deluxe*, you are offered a choice from five types of 'project'. The selection is quite good, but if you want to design a single sheet that doesn't quite fit any of these descriptions – a newsletter, for instance – all you need to do is choose 'sign', then later select the option for 'no preset layout' and design your own from scratch.



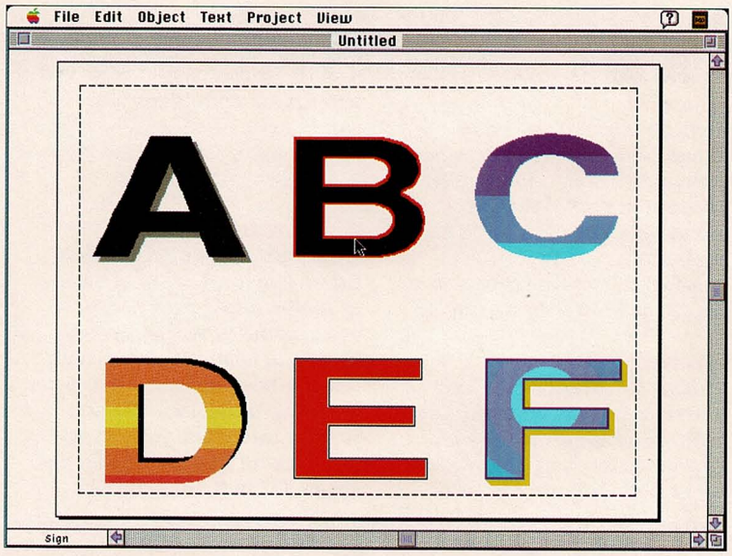
2 I've decided to go for a 'greeting card' design. These are all set up with the correct orientations for double-folds (so that printing on one side of the paper produces both the outside and inside images and the text). They can be used for several tasks other than greetings cards – invitations, table placings and so on.



3 I've chosen to do a Side Fold Spread card – ie, one with a portrait-oriented front, and where the whole inside spread is used, not just the right-hand page. The next thing I have to decide is whether I want to use a backdrop on the front of the card and, if so, which. Any of the backdrops in the library can be previewed.

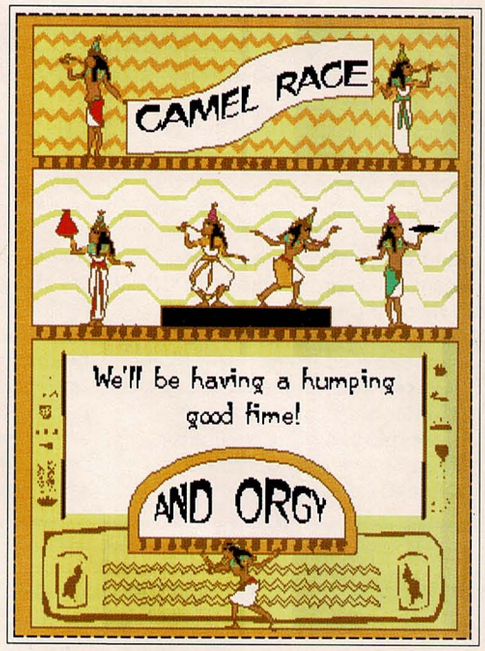


4 Having opted for the 'Egyptian party' backdrop, I can choose from five preset layout styles, or select 'No Layout' and design my own. I've settled for one of the presets, which has shaped greetings, headlines or slogans at the top and bottom, with a panel for more standard text just below the centre.



A few samples of the text effects that can be applied in *Print Shop Deluxe*. 'A' is plain black text with a grey drop shadow; 'B' is black text with a red outline; 'C' is a blend down from dark to pale blue; 'D' is a double blend with a black block shadow; 'E' is red with a highlight between the character and the black outline; 'F' has a radiant blend, an outline and a shadow.

If you're considering a package like *Print Shop Deluxe* for educational purposes, you want to know how easy it is to use and how much it teaches you about DTP. Fair enough. But it is also perfectly usable in its own right, and fully capable of producing finished projects like this invitation. If you're looking for an inexpensive page-makeup package, it may be all you need!



are 80 in all), square graphics (116 of them), column graphics (tall and thin; there are 23 of these) and row graphics (long and flat; 25 in total). In addition there are square images which can be 'tiled' into backdrops, plus special banner backdrops with two fixed ends and a central 'stretching' section which tiles to allow the banner to expand to the required length.

The majority of these graphics are in colour. The non-banner backdrops and square, column and row graphics can all be exported as either PICTs or EPSFs, making the package a reasonably useful clip-art source for your other software as well. Other PICTs may also be imported from outside the package by simply copying and pasting.

Square, column and row graphics can be moved, resized, stretched, rotated by any whole number of degrees, and flipped (horizontally, vertically or both). Text can be used at any size from 9 to 144 points; styled; ranged left or right, centred or justified; and placed at the top, centre or bottom of its block. It can even be vertically justified, flipped, rotated and coloured. All types of object may be selected and forced to align by any of their corners, by any of their edges, or by midlines.

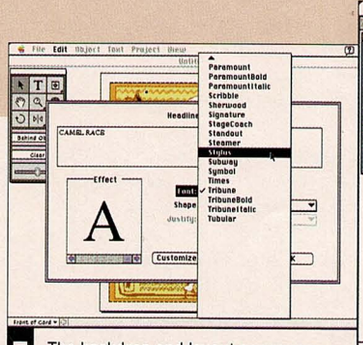
Basic desktop publishing is an increasingly useful social and professional skill...

For headlines, it's possible to shape the text, apply one of 25 pre-designed effects, or produce your own customised effects. The package includes options for thin, thick and highlighted outlines, four types of colour blends, eight varieties of shadow, and 'silhouette' backgrounds, either plain or blended. Check out the screenshots for an example of possible custom effects.

No more sticky-back plastic

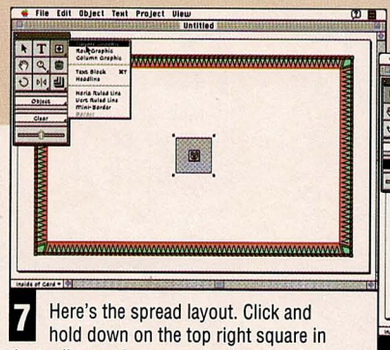
While it is perfectly possible for adults to enjoy using *Print Shop Deluxe* (even to make productive use of it), there is also a great deal of potential value in this program for older children. It is ideal for creating cards, invitations, posters, flyers, place settings and so on – and what you can learn from making them with this package goes well beyond what we found out by using scissors, glue and crayons.

With the regrettable, but bearable, exception of leading, all of the basic functions of DTP are present in this package: text and graphic elements; text entry, editing and manipulation; graphics import and manipulation; object placement; scaling; rotation. Anyone who has mas-

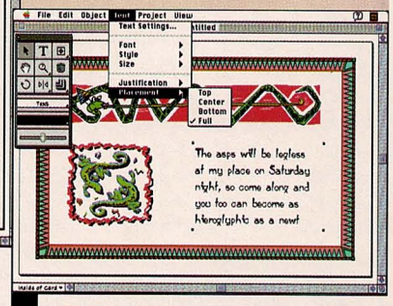


5 The backdrop and layout appear on the screen, and this is the dialogue when I double-click on the top headline. The special effect is known as 'Double Arch Up', and is one of 20 distortions available. The preset font is Tribune, but I've decided to change it to Stylus.

6 With the front as I want it, I can use the small pop-up menu at the bottom left to move to the centre spread. I select 'No Backdrop' from the dialogue box, and then choose from a massive 27 preset layouts or design my own. I'm going to do the latter...



7 Here's the spread layout. Click and hold down on the top right square in the toolbox and you can choose to add any new element to the page. I've already placed a border, double-clicked on it and chosen one of the 35 line and pattern options. The new square graphic (which is in the centre at the moment) can easily be moved and resized using the pointer.



8 Here, the final touches are being made to the centre of my card. The only notable control missing is interlinear spacing (leading) for the type, but I'm working on that by choosing vertical justification and then tweaking the height of the text panel. If I wanted to, I could now design a back page for the card as well.

FIVE PRINT SHOP PROJECT TYPES

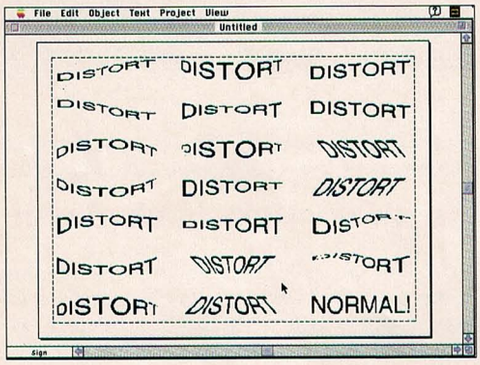
Greeting card
These are items where the program correctly orients four 'pages' on one side of a sheet of paper so that, when it is folded twice, they form the front, back and inside spread of a mini-booklet. There's a choice of side-folded and top-folded orientations, with portrait and landscape shaped fronts respectively. As well as birthday cards and similar, they can be used for such thing as party invitations, house move announcements, table place cards and so on.

Sign
This is designed principally for portrait or landscape orientated signs, either as single sheets or as 2 x 2, 3 x 3 or 4 x 4 joined posters. The manual suggests that by cutting multi-item sheets it's also possible to use this option to make sets of bookmarks, name tags and bumper stickers, or (using tiled images) for sheets of wrapping paper. As mentioned in the main article text, this is also the option which will allow you to create your own custom documents.

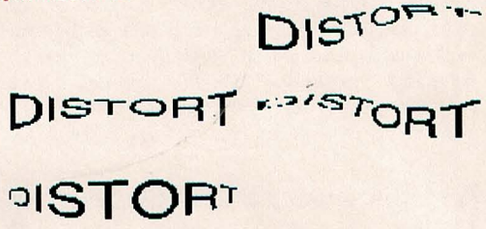
Banner
Vertical or horizontal strips – of joined pages, in the likely event that you're using a sheet printer. The central part of the background graphic 'tiles' in one direction so that the banner stretches to as many sheets as are needed to fit in your message.

Letterhead
Regular letterheads print on individual sheets of paper, while notepad designs are half the size and print as a pair on each sheet. Both options will print letterheads with blank text spaces to be filled later, or type in your letter from within *Print Shop Deluxe* itself.

Calendar
Automatically generates calendars, using a selection of backgrounds and designs, for the year, month or week of your choice, or a one-day sheet with ten one-hour divisions (say 8 am to 6 pm). In the monthly and weekly calendars, you can append text or graphic icons to the spaces for individual dates.



Print Shop Deluxe's 20 headline-shaping options, reading down the columns: Double arch up, Double arch down, Arc up, Arc down, Top arch, Bottom arch, Round top, Round bottom, Squeeze, Balloon, Perspective right, Perspective left, Fan, Receding, Angle up, Angle down, Slant left, Slant right, Pennant right, Pennant left.



tered these will, once they decide to progress to publishing their school magazine or society newsletter, find the concepts and controls in DTP or integrated packages at least reasonably familiar.

The ability to perform basic desktop publishing, in one form or another, is becoming an increasingly useful social and professional skill, and gaining this at an early age may be regarded as an educational achievement these days. You can't reasonably expect the average youngster to take enthusiastically to *PageMaker*, *QuarkXPress* or even *ClarisWorks* when their pals are playing with those ubiquitous console hedgehogs and plumbers, but there's a good chance that they will find a package such as this one enough fun to be intrinsically attractive, yet they'll be learning while they're having a good time. And there's no better form of education than that.

Martyn Lester

PRINT SHOP DELUXE

Price: £54.99. Published by Brøderbund, and distributed in the UK by Electronic Arts, tel. 0753 549442. Requires a 68020 processor or higher; System 7.0 or higher; 1.44Mb floppy drive; hard disk with 6Mb free for intallation (takes up 4Mb once installed); fully Macintosh-compatible monochrome or colour printer.

Ease of use You barely need the manual.	90%
Documentation Clear, with few errors.	80%
Features Not quite a fully-fledged DTP package.	65%
Value for money Includes 30 fonts and 300 graphics!	90%
MACFORMAT RATING	85%

And finally... the latest news on the 'damaged' fonts problem

At last we have an answer to the 'damaged font' problem which we mentioned back in MACFORMAT 9, namely how to remove a font which System 7 believes to be damaged but won't let you remove, or even overwrite with an undamaged copy because the Mac insists that the font is still in use.

Our solution was a simple one: the font wouldn't be regarded as in use, and therefore could be deleted or overwritten, if you restarted your Mac from an alternative start-up device – your Disk Tools floppy, for instance. (As an alternative, I usually keep a 'clean' basic system on a SyQuest cartridge.)

'Freewheelin' of Hounslow (AKA Simon Banton) has another solution though. Here's what he has to say...

"I've often found that a suitcase of screen fonts created under System 6.0.x and transferred to System 7 can appear damaged. One reason is that, under System 6 and using *Font/DA Mover*, it's possible to repeatedly add the same screen font at the same point size in the same suitcase. For example, you might see the following in the *Font/DA* dialogue window:

Helvetica 10
Helvetica 12
Helvetica 12
Helvetica 12
Times 10
Times 10

"Under System 7, you wouldn't be able to put together a suitcase like this, because the Finder would warn you that there was already a font with that name in that suitcase.

"The solution is to get hold of a copy of *Font/DA Mover* that is System 7-compatible (v4 or higher), or create your own by changing v3.8 Creator Code from DMOV to ERIK using *ResEdit*, *FileBuddy*, *DropGetInfo* or whatever. Use this to open the damaged suitcase, then select all but one of the duplicate screen fonts and click Remove. Alternatively, create an empty suitcase and only move unique screen fonts from the damaged one into it. The result will be a suitcase that you can double-click to open under System 7, without getting a report that it's damaged any more."

Although this isn't the only reason for 'damaged' font syndrome (I've seen it in items that haven't been anywhere near a System 6 machine), these are certainly useful tips if this is the cause of your problem – particularly if you've lost or damaged the original font disk, in which case the simpler solution in MACFORMAT 9 is impracticable. For more details, you can order issue 9 on page 94.

In the meantime, thanks, Simon – er, I mean 'Freewheelin'. One of those exclusive MACFORMAT T-shirts is on the way...

THE GAMES SELECTION

Trinity Systems has spent long, arduous hours play testing every game we could find to bring you the very best Mac games there are, and here's our top ten...

1. Civilisation
Any way you cut it this is the best computer game ever, and we Mac owners have got the best version. You start with a small band of settlers; you must build a mighty civilisation and one day reach the stars. Try being peaceful and democratic, or go all out for military technology to defeat your enemies: every game is different. For PowerBook owners it's the best way to pass a long flight!
Order code: FCIV Price: £36

2. SimCity 2000
The original was a classic, but the sequel is better! 3D graphics make your city come to life as you struggle to build a thriving community. The ultimate software toy!
Order code: FSC2 Price: £36

3. PGA Tour Golf II
Another sequel which beats the original, this is the best golf game ever, and only falls down by not pouring you a glass of Glenlivet on the 19th. The new version has extra courses and a skins game, plus control enhancements.
Order code: FPGA Price: £36

4. LeChuck's Revenge
More sequels, what is going on? LeChuck's Revenge is that rarity a funny computer game. Produced by LucasArts, of Star Wars fame, it's a comic adventure set in pirate days with one of the simplest interfaces of any adventure game.
Order code: FMI2 Price: £42

5. Chessmaster 3000
Plays the best game of chess of any Mac in town – winner of a recent computer chess championship.
Order code: FCH3 Price: £36

6. Railroad Tycoon
By the same programmer as Civilisation, Railroad Tycoon gives you all of England as a train set. Build your fortune by expanding your network.
Order code: FRRT Price: £33

7. Hellcats over the Pacific
Set in WW2, this is reckoned by those who know to be the best flight simulator available on the Mac...
Order code: FHEL Price: £47

8. F/A-18 Hornet
Except by those who reckon this is, of course. Like Hellcats, with jet engines.
Order code: FFAH Price: £53

9. Darkseed
Evil, Alien-style graphics make this an atmospheric adventure with plenty of puzzles.
Order code: FDSF (disk) WDSC (CD-ROM) Price: £39

10. Populous
You are God. Your people will follow you anywhere. The best God-sim.
Order code: FPOP Price: £36

Get twice the RAM for less than £70!

HOT!

RAM Doubler
An extraordinary software utility which effectively doubles the amount of memory in your Mac for just £69! It uses clever techniques to make more memory available while scarcely slowing your Mac at all, so you can keep more programs open at once. Essential on a 4Mb machine, and incredible value too.
"A useful and inexpensive alternative to buying more memory" – Macworld
Order code: FRAM Price: £69

100 quality fonts for only £50

100 Great TrueType Fonts
One hundred classic fonts, from Gill Sans to Plantin, from Garamond to News Gothic, in TrueType format to work with any printer, including StyleWriters and LaserWriters. No silly display faces you'll never use, just classic fonts from one of the longest established font foundries in Britain – Monotype. Fonts include: Abadi, Albertus, Arial, Baskerville, Bell, Bembo, Centaur, Colonna, Ellington, Engravers Old English, Footlight, Garamond, Gill Sans, Gill Sans Ultra, Goudy Old Style, Joanna, Kino, Lydian, Matura, News Gothic, Nimrod, Onyx, Perpetua, Photina, Plantin, Rockwell and many more.
Order code: FMFT Price: £50

The daftest Mac program ever!

Underware
Imagine a screen saver which works while you work, animating the desktop in the background, then imagine a Californian with a warped sense of humour designing the animations. You've got Underware. From a thief nicking your 68040 to a dragon burning holes in the screen, and an incompetent Tarzan who crashes into windows, Underware is A1 daft. It's also a marginally more sensible screen saver and desktop customiser – MacFormat gave it 93%.
Order code: FUND Price: £37

Printing with style & economy

Hewlett Packard DeskJet 310 with sheet feeder
The HP DeskJet 310 is one of the most stylish looking – and cost effective – inkjet printers around. It's portable and can run off batteries, comes with an AppleTalk interface for printer sharing and a sheet feeder for desktop use. Best of all is the print quality - 300dpi and sharp with it. And all you have to do is swap ink cartridges to make it full colour – we used it to proof this ad (and most of the fonts are from the TrueType collection, too!). A bargain.
Order code: FDJT Price: £299

NO HIDDEN EXTRAS!
All our prices include VAT, packing and postage – what you see is what you pay! UK only – overseas customers please phone for prices.

HOW TO ORDER
Orders can be placed on by telephone or fax with Visa or Mastercard, or send cheques made payable to "Trinity Systems", quoting the order number given. Fax no: 0225 482567. E&OE.

LATE ORDERING WEDNESDAYS TIL 8

The best CD-ROM game yet!

HOT!

7th Guest
If you enjoy solving conundrums and you have a CD-ROM drive then you'll love 7th Guest. It's already a smash hit in the PC world, where its sumptious graphics and killer gameplay have made it an instant classic; to call it a graphic adventure is like calling a TVR Griffith a mere car! "A visually stunning, technically unique experience ... the closest experience to virtual reality yet." – Inside Mac Games.
Order code: F7TH Price: £55

Extra hard disk space cheap

SuperDoubler
If you're running out of hard disk space, why not invest in SuperDoubler from Symantec? Using SuperDoubler you can compress the files you are not using down to a fraction of their original size, freeing up acres of space. But the files are still instantly available to you at any time. Also allows you to fit more on a floppy disk when dealing with large graphics and documents, and speeds up copying files. Contains DiskDoubler, CopyDoubler and AutoDoubler, total RRP £184!
Order code: FDBL Price: £89

Get on line with a bargain

HOT!

US Robotics Mac & Fax
Rated by all the Mac magazines as the best value modem when it was priced at £460, at £220 it's the bargain of the year! Featuring blistering raw speed of 14,400baud, further enhanced by industry standard data compression up to 56,000, this BABT approved modem can send and recieve faxes and comes with all the cables and software you need to get on line. Take the plunge into the information super highway at an all time low price!
Order code: FUSR Price: £220

A Mac action game? Surely not!

Deliverance
The sort of platforming action you normally associate with an Amiga or Nintendo comes to the Mac with Deliverance. You and your trusty sword must defeat hordes of orks and suchlike. A great break from ClarisWorks!
Order code: FDEL Price: £36

Trinity Systems CD-ROM Showcase

Xplora1: Peter Gabriel's Secret World
See the videos, hear the music, try the instruments, remix the track, set up the jam sessions, wander backstage, explore the studios – Xplora is an interactive journey into the backstage life of Gabriel and his Real World record label. Beautifully done, with over an hour of video and one of the slickest interfaces around. An experience for everyone, Gabriel fan or not.
Order code: FXPL Price: £36

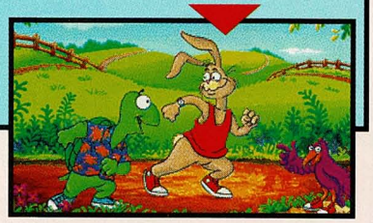
1994 Grolier Encyclopaedia
Rated by CD-ROM Today as "a very accomplished work ... the detail is very impresive, and it is extremely fast", this multimedia encyclopaedia comtains a complete multi-volume encylopaedia of text plus hundreds of pictures, maps, diagrams and video clips, all made interactive with hypertext.
Order code: FGRO Price: £170

Microsoft Art Gallery
The National Gallery carefully digitised and translated onto CD. Complete with interactive guided tours and information on the artists.
Order code: FMAG Price: £49

Myst
Atmospheric yet fiendishly difficult, this surrealistic adventure shows what the potential of CD-ROM is. Top class, and rated at 95% by MacFormat.
Order code: FMYS Price: £36

The Journeyman Project
Huge adventure game spanning millions of years and millions of miles. One of the very best CD games.
Order code: FJMP Price: £36

Tortoise and the Hare
Anyone with kids and a CD drive MUST own this hysterical disk! Enthralling interactive animations hold kids from 6 to 60 rapt in front of the screen while they play with the Mac.
Order code: FTAH Price: £36



Trinity Systems

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THE HOTTEST MAC PRODUCTS AROUND!

All aboard for ColorStation

If you're looking for an all-in-one graphics package with high quality print capabilities at an affordable price, *ColorStation* may just fit the bill.

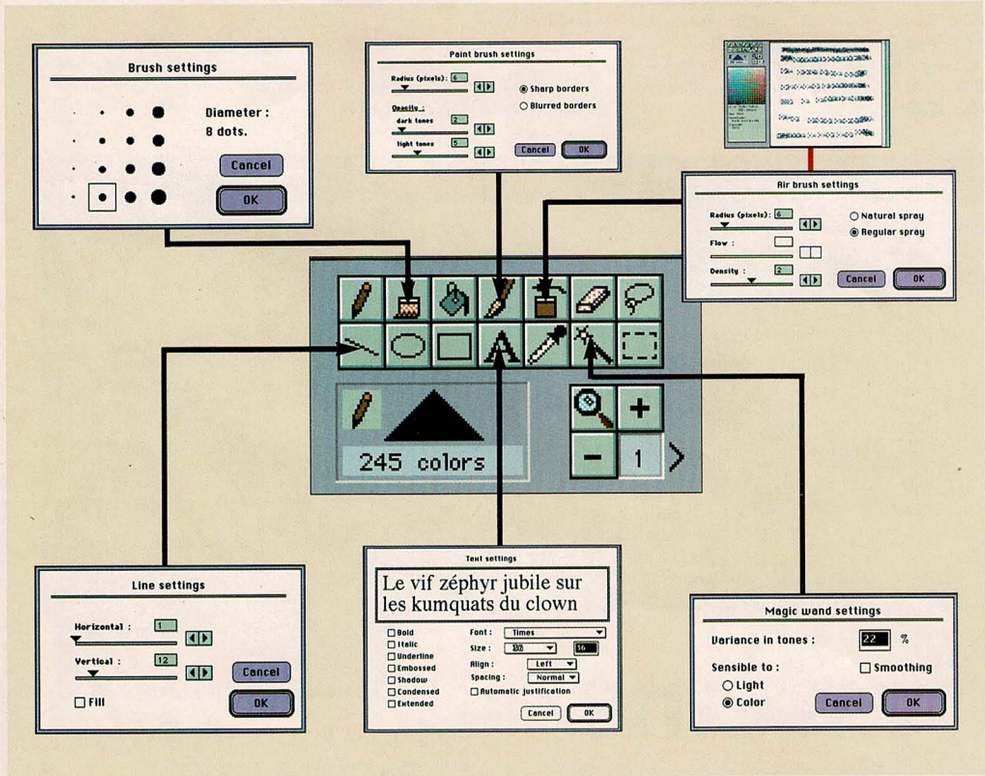
Le Pixel's *ColorStation* is a paint and retouching program, similar in most respects to Timeworks' *Color It* package. In fact, the main thing which separates the two is *ColorStation*'s ability to optimise your print setup via a nifty little device called HQP. HQP, or High Quality Printing (what else?), ensures that you always get the very best results from whatever output device you're using (whether it's a StyleWriter, Personal LaserWriter, Kodak Diconix 701 or any of the other popular printers which *ColorStation* supports).

With a package that claims to be part paint program, part image manipulator and part print program, the phrase 'jack of all trades and master of none' might spring to mind, but that's certainly not the case here. *ColorStation* doesn't pretend to be a *Photoshop* or *ColourStudio*. It is firmly aimed at the novice graphics or DTP enthusiast, and it means you don't need a degree in electronic publishing or an expensive, high-spec setup to produce a good quality proof. It's also easy to install and offers a Help Balloon option for beginners.

Even a newcomer to painting on the Mac will have no problems getting started. *ColorStation* uses a single toolbox to house all your general tools (magnifying glass and dropper); selection tools (shape selection, lasso, and magic wand); brush tools (paint brush, airbrush, pencil and eraser) and paint tools (shape, fill bucket, line and text). The tools are located at the top left of the document window – they're not free-floating, which is a shame, but unless you're working on a large screen, it shouldn't prove too much of a handicap.

There's also a large colour palette display, which – while a little over the top for some tastes – is a joy to use. There's not much in the way of patterns and textures, however, and some designers might miss the wider range available in other graphics programs. On the plus side though, importing PICT files or using *ColorStation* to create your own patterns and textures is a straightforward process.

If you own a Logitech Scanman 32 it's possible to pull images directly into *ColorStation*, using the Scanman XTND-F extension. You can also open TIFF, GIF, PC TIFF, *Photoshop* and EPSF images by using Claris XTND.



The toolbox in *ColorStation* gives you easy access to the basic paint package tools. They're all pretty self-explanatory. Above the airbrush settings dialogue we've shown some tests with the airbrush tool – it is possible to create some natural paint effects.

Tooling-up

The magnifying glass is clear and doesn't suffer from some of the idiosyncrasies which mar other entry-level programs. Both the paint and airbrush tools are fairly basic, although they do include some extra control options, which is good news in this price bracket. Just double-click on the paint or airbrush icon and an options dialogue box will appear, enabling you to 'tune up' your brushes. In the paint option, for instance, you can change the diameter of your brush, while the airbrush dialogue gives you control over the radius and opacity of your strokes. Sadly, though, there's no test area to preview your new brush styles – so it's a case of crossing your fingers every time you use them.

While we're on the subject of tools: what's with this 'tapping on wood' sound effect every time you click a tool icon? It doesn't half get on nerves after a while.

ColorStation, like its low-cost paint program cousins *Color It* and *Brushstrokes*, is a friendly and intuitive introduction to painting. It will do everything you'd expect from any basic art package, but, unless you need the extra imaging and printing features which *ColorStation* offers, you'll probably be better off looking at a more fully-featured program, one which lets you create graduated fills and offers more control over tools, patterns and custom backgrounds. It's really a question of your needs. If the bulk of your work consists of photo-retouching and image editing (cropping, flipping, re-sizing and correcting), then this is an ideal package. There are programs which include more features, but not at this price.

The image-editing side of *ColorStation* offers excellent selection control via the magic wand, lasso and marquee tools. If you enjoy working

with scanned photos or adding new treatments to your photo CD snapshots, then you'll love *ColorStation*. It has all the basic image-editing controls: you can add or subtract parts of your picture, paint, retouch, flip and rotate. Unfortunately, though, you can't distort, slant, add perspective, sharpen or de-focus images. But when you've finished 'enhancing' your holiday snaps, you can save your new designs as PICT files and import them into DTP software.

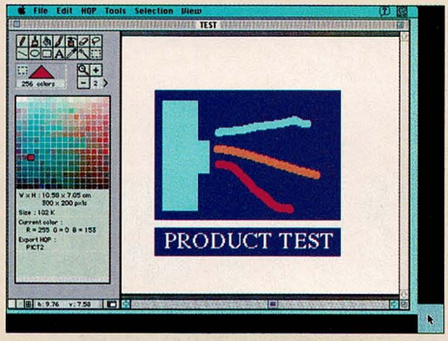
It's only when you discover the print enhancement side of *ColorStation* that you begin to understand the real power of this package. If you're fed up with the speckly photos and streaky illustrations which your printer spews out with complete indifference, try HQP. It means you can refine, convert and manipulate your *ColorStation* images, and then calibrate your printer to achieve the very best quality possible from it.

Photo-finish

There are three principal options under the main HQP menu. First is **Copy HQP**; this copies your image or selection in HQP format, enabling you to paste it directly into your word processor. Second is **Export HQP**; this enables you to import an HQP file into any other document. The third is **Copy/Export format**; this enables you to select a specific printer and define printer characteristics. All the options in the dialogue boxes are in plain English, so it's easy to select a setup or preview your image.

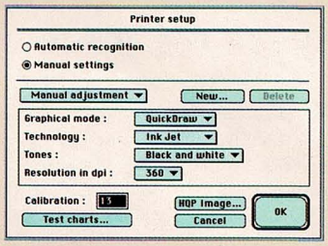
There's also an automatic setup for optimum print quality, or, if you prefer, you can override this and tap in your own values. You can filter out any dominant colours, smooth the outlines or adjust the scale of the image. There are some basic filtering, brightness and contrast controls under the HQP **Image Setup** menu, as well. In addition to all this, there's also a **Photocopy Master** setting, which enables you to print out a master copy for duplicating, which helps prevent loss of image quality.

You can also optimise your printouts using the 'contact sheet' mode. Test sheets can be set for colour or black and white, in sets of 9 to 32 images, and in large or small format depending on your final output needs. The package also includes useful test charts which help you calibrate and optimise the capabilities of your printer. Like so much in the package, the calibration controls are easily understood, so you won't need a Systems Manager or Apple Engineer on hand to make any adjustments.

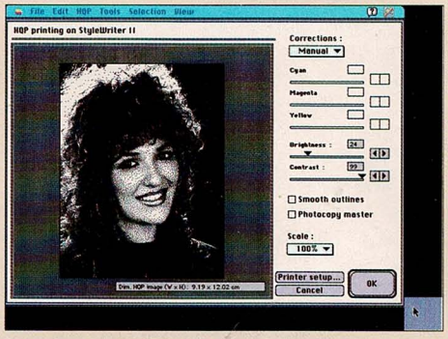


You can 'rough out' ideas using *ColorStation's* paint tools, then add scanned or PhotoCD images.

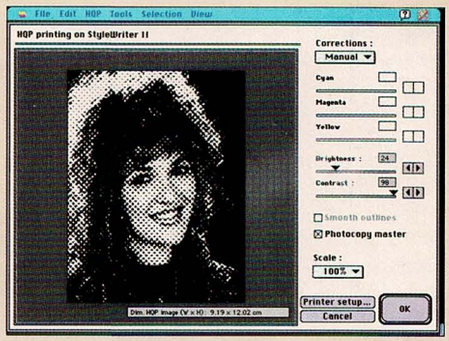
ColorStation is ideal for simple image editing – here, the model's eyes have been changed from brown to blue.



You can configure the settings of your output device or use 'automatic recognition' for an easy life.



Before printing, adjust the brightness or contrast of your image using the sliders and you get a handy preview.



A simple check-box converts your original to a high-contrast photocopy master to help minimise quality loss.

ColorStation should prove useful to the new generation of LC desktop publishers, who are increasingly demanding high quality proofs and printouts. Whether you run a small newsletter from home or need to impress business clients, *ColorStation* is excellent – and at only £67, it's great value, too.

Other software producers could certainly learn a thing or two about ease of use and value for money from Le Pixel. It's hard to fault *ColorStation*. OK, it could do with 'pepping up' on the painting and image editing front, but it's unfair to put *ColorStation* up against high-end graphics programs. With its straightforward controls, *ColorStation* is an excellent choice for novice 'DTPers', covering all the graphics and printing bases in a convenient one-stop program. It does a great job and offers excellent value for money.

Gordon Druce

BRUSH UP YOUR IMAGE

There are five basic types of graphics programs on the Mac: paint and/or image editing; drawing (drafting, CAD); PostScript based illustration software; 3D mapping and rendering; and hybrid programs which enable you to do PostScript drawing and bitmap painting by flicking between different layers within the same software.

ColorStation falls into the first type, which means it creates bitmap files. Bitmapped images are formed by a rectangular grid of pixels. The computer then assigns a value to each pixel, from say, one bit – which would mean it was black and white – to as many as 24 bits per pixel for a full colour image. Bitmapped images can be scanned artwork, imported pictures of any description or images prepared within paint programs. All TIFF and PICT files are bitmapped graphics.

Bitmapped images are restricted in their output, because once they're placed in your DTP software they can't be scaled up (well, not without the image becoming pixelated, that is). Images have to stay the same size, so the resolution has to be set during saving or scanning.

COLORSTATION

Price: £67. Requires: any Mac with Colour QuickDraw and System 6.0.7 or above. For more details call Le Pixel on 010 33 75404646.

Ease of use 94%
Clear controls make this ideal for the novice Mac user.

Documentation 85%
The program's self-explanatory, so you can wave goodbye to 'door-stop' manuals.

Features 90%
Although there aren't that many features for each of the separate functions, taken as a whole this has plenty to offer a novice DTP enthusiast.

Value for money 90%
A basic, 'three in one' paint, retouch and print program for £67. Can't be bad..

MACFORMAT RATING 90%

Move over inkjets

It may not be a licence to print money, but Fargo's Primera can give you dye sublimation quality for the price of an inkjet.

The Primera from Fargo is a nifty little printer which handles four-colour, wax thermal printing for about the same price as a good colour inkjet. What's more, for an extra £350 you can upgrade it to dye sublimation, noticeably boosting colour quality and clarity beyond any standard inkjet printer.

The quality of Primera's colour, compared to other similarly priced printers, is naturally its most attractive feature. Using wax thermal printing, its colour quality matches that of an inkjet. Adding the dye sub driver and ribbon, however, produces even better colour, with a crisp, clean range of tones. You can even increase the Primera's maximum number of colours from 256 to 16.7 million, simply by using 32-bit QuickDraw in System 7.

Obviously, the printer doesn't recognise the difference between your on-screen colours and what shoots out of the printer, so, in order to get perfect reproduction, you may have to use one of the Primera's three methods of colour-matching. First, you can attempt to 'teach' the printer, by adjusting the intensity of the prime colours until you feel the printed blends match the on-screen colours. Second, if you don't think you have a good enough eye for this type of thing, then you can let the Mac tweak them with an algebraic colour shift option to ensure that gradient blends are accurate and continuous. Third, Primera also has a 'ColourSync' option which keeps colour codes constant. This means you can fix a maximum number of codes for photographs, ensure pure tones for graphics and text, and, incredible though it may seem, have objects which should be the same colour match up exactly.

Colour matching is a trial and error process, however, and whichever method you choose to employ, you can expect to go through masses of ribbon and paper. This is where Primera fails to match rival inkjets. Its printing consumables are very expensive. Dye sub printing requires a special paper which can fix the dyes used, but at a whopping £2.90 for every A4 sheet you really have to begin to question the benefits. Wax thermal printing, on the other hand, uses cheaper paper and ribbon, and costs a more reasonable 50p for a three-colour page, and 60p for four-colour one. Monochrome printing is also possible with a separate ribbon, and it's much cheaper at around 10p a print. You could, of course, cut costs by using normal paper for wax thermal printing, but colour quality is lost, and the output tends to be rather flecked and inconsistent.

High costs mean that the machine is not an efficient option for printing test proofs, especially when some bureaux are offering Cromalin colour-matched proofs for as little as £10. Using the recommended paper has a definite quality advantage though, because pages never get distorted during the printing process, as they can with wet inks. The printouts are glossy and won't smudge even if they get wet. This makes the Primera a good choice for producing high quality presentation material, without the expense of a colour laser printer. The Primera has other advantages, too. For instance, it's capable of printing non-smudging colour transparencies, providing that you use transparency sheets with a registration line across the top (a white line the printer's 'eye' can see). It can also print T-shirt transfers, so you can get artwork off your Mac and on to your chest.

The Fargo Primera brings dye-sublimation quality colour output to your desktop at a relatively affordable price.

After the cost of consumables, the Primera's 203 dots per inch print resolution might seem to set it behind a colour inkjet (these typically offer around 360dpi). But inkjets tend to 'bleed' the ink, which means that even with a theoretical resolution of 300 to 400 dpi, there is a slight blurring. Wax thermal on the Primera produces a comparable resolution to an inkjet, while the dye sublimation printouts, although at a lower resolution, look far better because the dyes never bleed or smudge.

To achieve good resolution, the printer driver includes the option of 'better bitmap scaling'. When the computer dithers the image, converting it from the screen's 72dpi to the printer's 203dpi, it has to convert each screen dot to either two or three printer dots. To make the bitmap conversion smoother and, hence, make graphic and photographic conversions look clearer, the printer driver enlarges the image by 6%. This improves the page's images, but it means that printouts can burst over the right and bottom margins. To produce a presentable page using the better bitmap scaling option, therefore, the user must remember to redefine the margins first.

The Primera's driver also includes three dithering methods. These can be used to enhance the resolution of different image types. The Floyd-Steinberg algorithmic dither is best for photographs, while the Bayer dither method should be used for graphics. For results on pages which include both text and photographs, Fargo's own dithering option, the imaginatively titled FARGO, should be used.

Sadly, text produced on the Primera doesn't always match the high quality of its colours and graphics. In its standard configuration as tested, it's not a PostScript printer, you see, and although it can use PostScript fonts via *Adobe Type Manager*, they tend to have slightly jagged edges. The crisper resolution, it seems, is a dis-

Hot Wax and Dye

Both wax thermal and dye sublimation are methods of thermal transfer printing. In wax thermal mode, the machine moves a transparent film (or ribbon) down the paper while a heated head melts the wax-based ink from the film on to the page. This is done three times, once for each of the primary colours: yellow, magenta and cyan (in that order). Theoretically, any colour is achievable by blending these three. With a three-colour ribbon, black is printed by combining the three colours at full intensity. This is called an 'additive' or 'process' black. Four-colour ribbons have a separate black panel providing a 'true' black.

Dye sublimation printing uses the same process, but instead of melting the ink on to the paper, the heated head vaporises dyes in the ribbon. These are then fixed on to the special paper, resulting in even crisper results and finer resolution. Four-colour ribbons are not required with this system, because dye sub printing offers a more intense blend of the primaries for purer, richer colours.

advantage here, because the edges don't blur and disguise the flaws.

Even with the paper trays extended, the Primera is still a compact 20 x 14 x 7 inches. Printing in wax thermal mode is quite noisy and sounds a bit like a bi-plane, while dye sub printing makes a low, squeaky hum. Its speed is another drawback. It takes about five minutes to print a page of text in three-colour wax and 14 to print the same page by dye sublimation. Background printing is possible, but only if you run Fargo's *Backgrounder* program on the desktop. Naturally, running this in conjunction with the document's application program slows down any new applications you access.

While the printer is physically easy to set up, it takes a while to sort out some of its operational quirks. Using the printer while connected to Ethernet and AppleShare will further slow down print times. Worse still, the Primera refused to print while a networked Mac was using a different printer. And whenever it went off line – when it ran out of paper for instance – it wouldn't come back on until both it and the Mac had been shut down and restarted.

The Primera can't match the professional standard of a colour PostScript printer, but for the small office or home user, wax thermal offers a quality alternative to inkjet printers – and although the paper is much more expensive, the results are superior. The upgrade to dye sublimation, if you can afford the paper and ribbon costs, is well worth it in terms of quality, especially if you want to produce high-class presentation material. The cost of consumables is probably too high for the Primera to be used for repeated test printing, but when you consider that some dye sub printers (like the Tektronic Phaser IISDX) can cost around £8,000, the Primera looks a steal. *Garrick Webster*

FARGO PRIMERA

The straight wax thermal version, with start-up pack, printer software and cable, costs £1,050. The dye sublimation upgrade costs £350. A three-colour wax 115-image pack, including paper and ribbon, costs £45, while a 100-image dye sub pack (which includes ribbon and enough paper for 100 prints) costs £290. Ten T-shirt transfers cost £22 and 50 transparencies cost £42. (But shop around for better deals.) For more information call Bannerbridge plc on 0268 419 101.

Features 85%
Colour matching and dithering options can improve output, but even on background printing it's slow and quirky.

Installation 85%
Physically, it's easy to set up. The problems start when you try to print something.

Print quality 92%
The clear, non-smudging, dye sublimation prints offer great colour and resolution. Unbeatable in this price range. The wax thermal pages are pretty good, too.

Value for money 83%
This is a great price for a dye sub printer, but the consumables are pricey for a home or small business user.

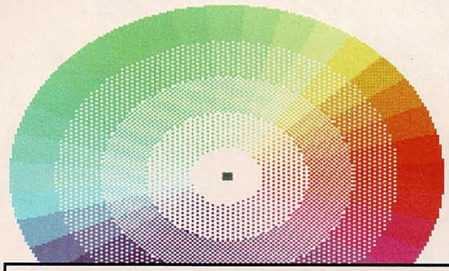
MACFORMAT RATING 88%

A TESTING TIME? JUDGE FOR YOURSELF

FULL COLOUR,

But what speed, quality and cost?

Fargo's Primera aims to give the home user access to dye sublimation and thermal transfer print quality for less than anyone else.

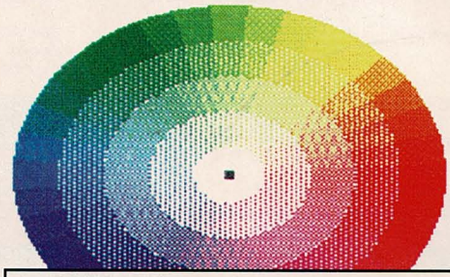


To give you an idea of what the Primera can do, we used *QuarkXPress* to create this test document. This is the original, output directly through our imagesetters.

FULL COLOUR,

But what speed, quality and cost?

Fargo's Primera aims to give the home user access to dye sublimation and wax thermal transfer print quality for less than anyone else.

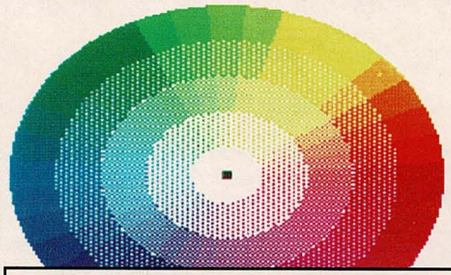


This is a scan of the Primera's output using wax-thermal (three-colour) mode, optimised as well as we could manage. (But it did take some trial and error!)

FULL COLOUR,

But what speed, quality and cost?

Fargo's Primera aims to give the home user access to dye sublimation and wax thermal transfer print quality for less than anyone else.



Finally, this is the Primera's dye-sublimation output. Allowing for the fact that it has been scanned and *then* printed here, this gives you a fair idea of the quality.

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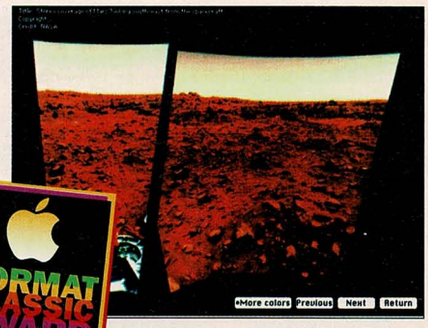
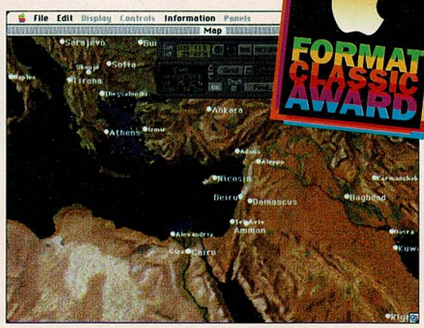
Cyberspace

It's time to toss all your old 78s in the trash as we prepare to hit the future of multimedia head-on with our 250 rpm CD-ROM reviews.



These stunning photos of Mars lend credibility to this package.

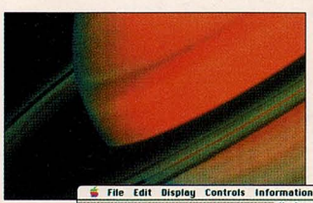


Using these detailed relief maps, you can view the skies from any position on Earth.

REDSHIFT

Any astronomy program which aims to demonstrate the universe's diversity of objects at various stages of their development needs to offer a four-dimensional perspective. *[You been talking to that Spock geezer again? – Ed]* *RedShift* succeeds admirably in this task, by offering views of all known heavenly objects – some 300,000 individual stars and galaxies – at any time between 4712BC and 11,000AD. But we're not talking about sterile, scanned-in star-maps here. Oh no. *RedShift* uses a combination of actual photographs, movies and high quality animation to portray the mysteries of the universe.

Perhaps the best way to begin exploring *RedShift's* astronomical offerings is to select one of the preset guided tours to galactic phenomena and events. There are 20 of these, ranging from lunar eclipses and Martian moon fly-bys to total solar eclipses and earthrises. Within each tour, you can vary your position, follow the direction of movement and even modify the rate at which time passes, so you can see the action without waiting hours (or even years of real time!). Once you've got to grips with your virtual space-shuttle, you can return to the main program and get down to the real business of cruising the universe. There are two main methods of exploration: first, you can navigate around the planets and moons making up the solar system, and second, view the stellar heavens.



Fly by Saturn, loop Jupiter and pull a hand-brake turn around the moon.

The solar system is represented as a series of realistic 3D models which you can move around in any direction and view from anywhere you choose. To add further realism, there are also 700 full-screen photographs taken by various reconnaissance vehicles and the world's largest reflecting telescopes. Any of your journeys through time and space can be captured as *QuickTime* movies for subsequent replay in *RedShift* – or indeed, any *QT*-aware application – so it's easy to design your own guided tours through the solar system, looping in and out of orbits to skate the rings of Saturn. And when deep space gets a little too deep, there's always the *Penguin Dictionary Of Astronomy* with its 2,000 hypertext-linked entries, replete with further illustrations and animations.

Using *RedShift* to provide accurate views of the heavens from any point and time on Earth is probably the reason most casual astronomers will buy this program. You can choose to stargaze from over a thousand named viewing locations, represented by detailed topographical surface maps of Earth, or enter your own longitude and latitude coordinates to set up your initial viewing position.

After selecting the desired time, you can then filter exactly what magnitude of stars you wish to view from your specified location. This means that only the brightest stars will be visible, rather than, say, the vast confusion of the Milky Way. You can also filter out planets, stars, constellations, asteroids and comets to provide even greater clarity in identifying particular objects of interest.

If you're still having trouble sorting out your Ploughs from your Great Bears though, *RedShift* also lets you just do a simple 'Find Object' search to call up the relevant star-map. With full printing facilities, you can then rush out into your back yard to discover where that obscure nebula cluster is hanging out nowadays.

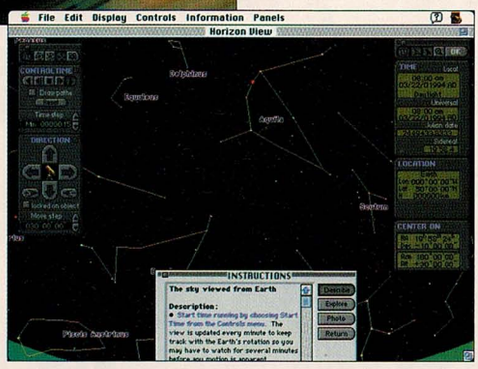
Redshift contains orbital data on 5,011 asteroids, 100 comets and 40,000 deep sky objects.

For true devotees of the Really Big Outdoors, the accuracy of data here is stunning: *RedShift* contains orbital data on 5,011 asteroids, 100 comets and 40,000 deep sky objects. But perhaps the most extraordinary things are the shaded-relief surface maps of the Earth, Moon and Mars, based on composite surveillance photographs taken by actual US and Russian spacecraft. You can travel across these landscapes, zooming-in on any area which tickles your telescope.

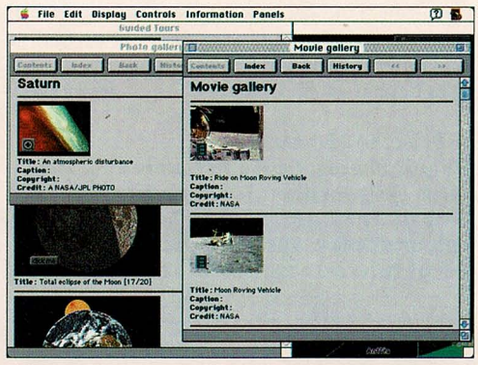
RedShift is the best astronomy program I've seen, and it'll provide hours of fascination for anyone with even the slightest interest in stargazing. It's a brilliantly conceived and excellently presented package with some genuinely innovative features. In fact, it's all a budding astronomer needs.

Andy Storer

Price: £79.
Requires: LCII or above with colour monitor and 4Mb of RAM.
For more details contact Maris Multimedia on 071 488 3029.



You can easily alter both the time and position of your viewing location with a comprehensive range of controls.



Redshift includes a variety of *QuickTime* movies, and you can even create your own, if you like.

MACFORMAT RATING 95%

AMERICAN HISTORY

One of the most studied pieces of film in history is shown here in *QuickTime*, as John F Kennedy's motorcade speeds him towards the assassin's bullets.

On the surface, Computer Vistas' *American History* offers the sort of multimedia research tool which schools and libaries have been crying out for, but it's really no more than a lacklustre fact file of American history. Entries can be accessed chronologically or alphabetically, or via categories like presidents, women, black Americans and foreign affairs.

Text and picture boxes pop up while a voice reads the text. You can watch *QuickTime* film clips of major events, like the moon landing; listen to excerpts from famous speeches; read historical documents; or view statistical data on a wide range of subjects from election results to religion. If you use a *HyperCard* interface, everything is in black and white – but then so's the historical content.

The material is delivered plainly and, although there's additional information for most subjects, there's very little depth or genuine analysis. The tone is inconsistent, too – ranging from mildly patriotic to simplistically crude – and much of it is pretty irrelevant for non-Americans. Some of the 40 film clips suffer from a serious lack of resolution and, as with other CD-ROM movies, the lip-syncing is absolutely pitiful. Kennedy's famous 'Cuban missile crisis address', for instance, is largely made up of a swirl of greys accompanied by a jumpy sound recording.

The movie window sometimes refuses to leave the screen after running its footage, and worst of all, the text is studded with spelling and typographical mistakes, which naturally undermine the CD's educational purpose. Still, every entry does have a bibliography and the 280Mb of Columbus to Quayle might be of some use to libraries or schools. For US history students who are looking for fast facts, figures and dates, it's the biz, but otherwise it's poor, very poor. *Garrick Webster*

■ **Price: £39.**
Requires: 4Mb of RAM.
For more details contact CD-Direct on 0800 317864.

MACFORMAT RATING 65%

SHAPES 1 & 2

The quality of the images in the *Shapes* series is excellent. Clicking on any of the three variants will add special filters to the photo you've selected.

Shapes Design In Nature and *Man-Made Design* are two clip photo collections with a difference. Each contains over 100 images which are accompanied by three variants per image, namely *Photoshop*-style effects such as Posterisation, Find Edges and Crystallisation. Of course, any clip collection stands or falls by the quality of the items it contains and, in this case, the photographs are of sufficient resolution to be published. They have the added advantage of being royalty-free, too.

The collections are very well presented. With textual descriptions and even some mellow background music, viewing the assembled photos on screen couldn't be easier. The trouble starts once you've selected your image, though. In a nutshell, there's no automatic export facility – you can't just hit a button and automatically copy your selected image to your hard disk. Oh, no. The actual process is a far more tedious affair.

Say, for instance, you've just come across a rather neat shot of a begonia, which you'd like to use in your graphics package. (It could happen.) You have to quit out of the viewer, load up an alphabetical listing of the images and then find begonia. You are then presented with this: 'Begonia against stone wall, S. France (Shapes #1:—Design In Nature: Chapter "Circles": PICT Image #001)'. Next you have to quit the text editor, locate the folder in question and extract the image manually.

If it wasn't for the brilliant, high quality images, this package would be a complete waste of time. It's a ridiculous situation, to be honest, especially when you consider that the coding required to offer auto-extraction is so easy to implement. Like I say, it's a good job the images here are so desirable. *Andy Storer*

■ **Price: £32.50 each.**
Requirements: *Design In Nature* and *Man-Made Design* will both run on any 030 with 4Mb of free RAM, System 7 and a 256-colour display. For more details contact Focus Interactive on 0590 612443.

MACFORMAT RATING 70%

INSTANT ART

If you regularly need to incorporate maps into documents which are then subsequently printed out as brochures or booklets, then this compendium of detailed PostScript images has just about everything you'll ever need.

Instant Art contains outlines of 141 countries in EPS format, along with 79 UK counties. There are also continental scale maps and others which highlight the areas' main features: cities, rivers, railways and airports. While all these maps are presented at 300 dpi resolution, there are also 72 dpi versions for screen-only presentations. The producers have even thrown in 100 tourist symbols and a 'Tourist' font, just for good measure.

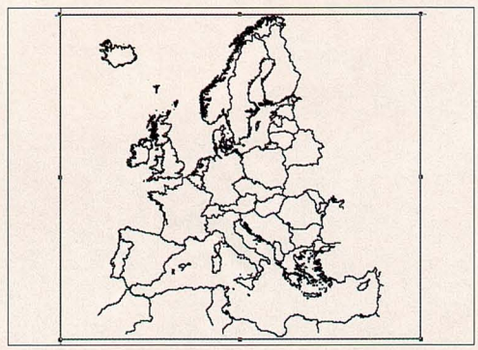
Sounds great so far, doesn't it? But the collection then extends into slightly more unrelated areas with 100 clip art illustrations and almost 200 cartoon caricatures. Add to these some 51 business forms in *PageMaker* format, including everything from ready-made invoices to credit notes and advice queries, and you have a rather perplexing disk directory.

> *Perhaps the package is aimed at the Secret Map Colouring-in Society…*

So, just who is *Instant Art* aimed at? Small travel agents? Tour guide agencies? I've no idea. Perhaps, as the assorted outline maps are all in mono, the package is aimed the Secret Map Colouring-in Society.

Unlike a number of other collections though, here at least *Instant Art's* images are known by their contents name, rather than some baffling code number. This means you can boot up your desktop publishing or graphics package and pull in your selected image without the usual tedious Post-It note routine. And believe me, that makes all the difference. *Andy Storer*

■ **Price: £52.80.**
Requires: any Mac with a CD drive.
For more details contact Magnum Software on 0884 820240.



With *Instant Art's* map series, you have access to PostScript maps of every country in the world.

MACFORMAT RATING 75%

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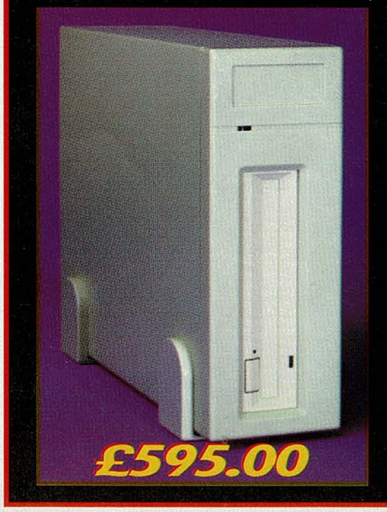

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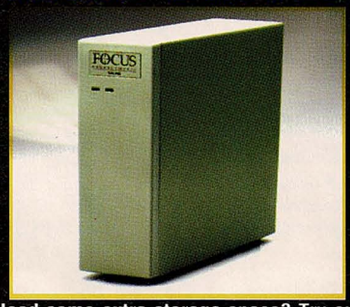

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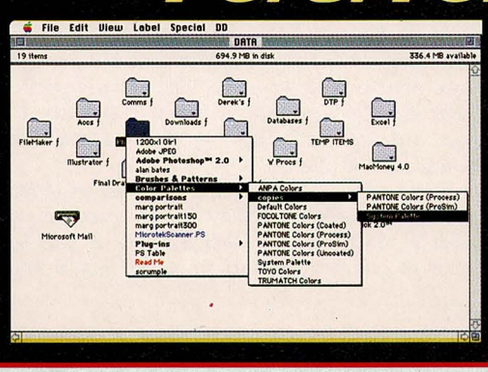

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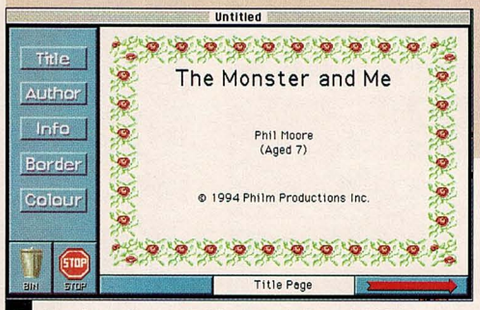
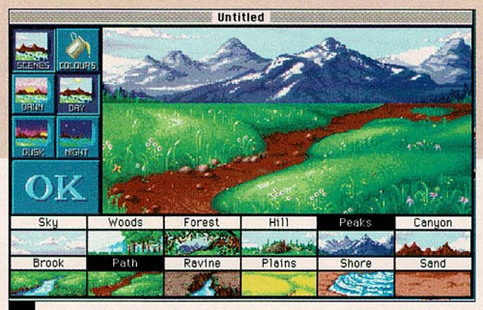
MAKING A STORY



1 Here's my first story. There are buttons for 'Title', 'Author' and 'Info' which put a cursor at the appropriate place. You can also choose a border – I like roses.



2 I like mountains, too. This looks like a good background for my story. I've set it in the day, but I could change it to night, dusk or dawn by pressing the relevant button.

3 The first page of my story. I've managed to put two children and a scary monster in front of a castle – and all without having to draw anything.

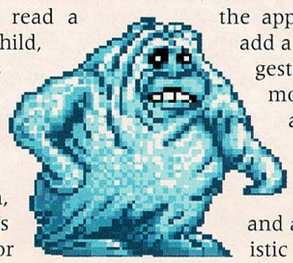
Tell me a story ...

Children can now create their own multimedia stories without having to learn complex programming. Here's how ...

Children learn about the world through stories – and not just listening to them but learning to tell them. So what could be better, educationally speaking, than a friendly program which makes it easy to put together your own stories? Put simply, *Story Book Weaver* is just that. It enables children to write a story of up to 50 pages and illustrate it with images and sounds chosen from predefined libraries.

However, that description hides the potential of the program, which, if used in constructive ways, could provide hours of purposeful play for children. No age range is specified for the program, which may seem strange at first glance because the words of stories need to be typed. However, very young children don't need to know how to read the words to enjoy reading a picture book with a parent. Similarly, with a child choosing the images and sounds and dictating the words for the teacher, parent or older brother or sister to type, very young children could use the program to make their own multimedia stories.

Many parents will be happy to read a print-based text together with a child, knowing that pointing at pictures and talking about the story makes the story come alive. Parents will probably be less comfortable and less confident when the story is electronically presented: there is a screen, and screen-watching (as in TV) tends to be a less interactive pastime for those gathered around it. Happily, the user guide contains some wonderfully sensitive and sensible advice to parents in its introduction. It suggests, for example, talking with children about their experiences and using other books which have been read as a springboard for their ideas. It even suggests visiting a local library together to "select books that explore the rich and varied folk literature of many cultures".



The program is simpler to use than I had expected: the sample story contains vivid pictures well beyond my limited drawing skills. However, when I selected the option to create a new story, I soon realised that there was no need to expose my inadequacies to MACFORMAT readers in the screen grabs in this article. A library of images and sounds is provided – 650 images, 450 scenery combinations, 16 colours, 41 sounds, 13 songs and 11 page borders. That should get any young child going, let alone a frustrated children's author.

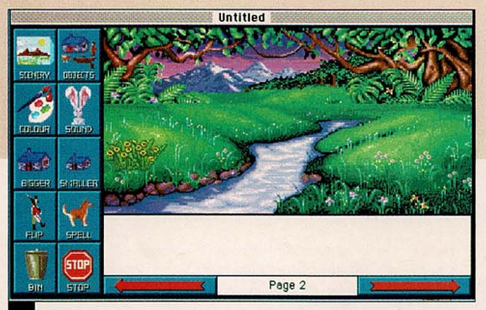
The elements of a page can be assembled in any order, although it will probably be rare for the writing to precede the picture as the pictures will suggest story lines. You select the backgrounds from the combinations offered and turn them magically into night, dawn, dusk or daytime simply by pressing on the appropriate button. It's possible to add a solid colour rather than the suggested scenes, so you can have mountains in the background and a solid colour for the foreground if you wish.

Then you add the objects. There is a good range of people and animals to choose from, the realistic ones representing a range of cultures and the imaginary ones providing some striking images. You have the option of changing the colour of skin tones and clothing, so the pictures can be customised to allow for virtually any flight of fancy. One drawback, however, is that no character is repeated in different positions: for my sample story, I had to choose two completely new characters for the page where they are sitting. (Notice the missing necklace? Children will.) This seems a little strange – children will want to represent their characters in a range of situations, and it wouldn't have taken much to provide the same character standing, walking, sitting and lying.

It could provide hours of purposeful play for children...

All objects can be sized to suit the scene, although they are not enlarged or reduced proportionally, which can make some objects look very strange. And, as they are enlarged, the blocks of colour in an object become more obvious and make it look less smooth. Nevertheless, children can play with perspective easily and can see that depth can be created in a picture with variations in the relative sizes of objects. Finally, sound can be attached to each object, so that when the object is clicked, the sound will be played.

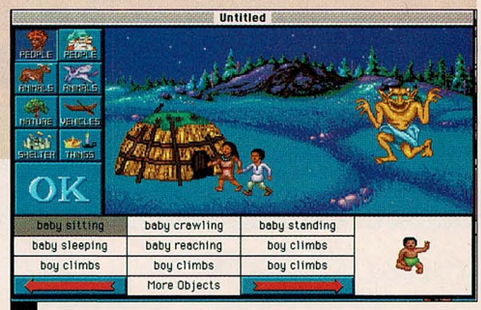
However, my major gripe with the program is that there is no ability to add pictures or sounds to the library. While children will be happy to construct a story using the images and



4 The next page – I chose 'Forest' and 'Brook' as background for the next part of the story. Now I select 'Objects' …

Untitled
SOUND
NONE
They walked all day until they came to a brook. They sat and rested while the monster read the latest issue of MacFormat.
OK
Page 2

5 … and add a few objects. I cut and pasted the monster from the previous page, but had to choose two new characters to get them sitting.



6 I've selected 'Objects' then 'People'. I can scroll through the options, seeing what the person looks like in the bottom right window, then just pop them in place

sounds provided, they will soon want to add their own, or others that they have gathered from elsewhere, in order to make the story really theirs. And it would be a really good touch to be able to record the child reading the story, along the lines of the Broderbund talking books.

Finally, the story can be saved to disk or printed out (in colour if you have a colour printer). If it is saved to disk, a reader program is provided, so that the story can be sent to someone else to read, even if they don't have the main program. The user guide rightly regards this as a form of publishing, and suggests that copies of stories be sent to relatives and friends – your child a published author! If relatives and friends don't have a Mac, the story can be printed out (without the sounds, of course) in a variety of forms – one or two pages of the story per page, or each page of the story across four A4 sheets. One word of warning, though: I used a laser printer to print out a page of the story across four pages and the quality was not very good.

Software houses are beginning to give children the potential to create their own multimedia stories...

Story is particularly important to the development of children's literacy – much of their early experience of the world is either received from or recounted through the medium. It is a very positive development that software houses are beginning to give children the potential to create their own multimedia stories: this program is one of the best I have seen in its balance between ease of use and the quality of the finished product.

Given the enormous sales of 'talking books' like Broderbund's *Just Grandma and Me* (and its inclusion in the Primary CD-ROM scheme – see last month's MACFORMAT), the potential for children to create their own multimedia stories could well provide a powerful learning tool: children can understand how books work by making their own with paper, but a program like this will allow them a greater chance to get to grips with the intricacies of an electronic text.

Phil Moore

HOW TO TELL TALES – AND GET AWAY WITH IT

Scenery – enables you to choose combinations of scenery for the background.

Objects – gives access to the pictures of characters and so on.

Colour – use this to change the colour of the words, people's skin and objects.

Sound – gives a menu of 41 sounds which you can attach to objects.

Bigger – highlight an object and you can make it bigger.

Smaller – highlight an object and you can make it smaller.

Flip – rotates an object through 180 degrees horizontally.

Spell – highlight an object, press the button and the word appears in your writing.

Bin – select objects and see them disappear.

Stop – this quits the story and takes you to the Main Menu.

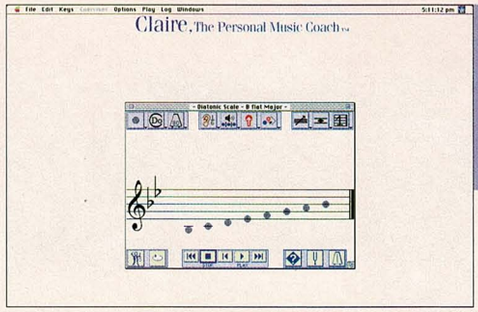
STORY BOOK WEAVER

Story Book Weaver is published by Europress (0625 859333) and costs £29.99. A PC-compatible version is also available.

Ease of use Very straightforward.	96%
Documentation An excellent introduction.	90%
Features Good, but could offer more flexibility for children to add their own images or even voices.	87%
Educational Value Great potential.	93%
MACFORMAT RATING	92%

Perfect pitch

Hit the right notes with Claire, your very own music coach, arrange your compositions to Latin guitar rhythms and catch up on the latest news...



Claire's main screen shows the notes you have to sing. You can adjust all speed and playback settings.

Claire is a Personal Music Coach designed to teach you ear training, sight reading and music theory. Now, ear training is traditionally one of the least-favourite subjects of music students – unless they're in the choir – and even many musicians have a 'poor ear'. Any program which can inject a little interest and motivation into the subject has got to be a good thing.

Claire is based on the solfege system, which uses the syllables Do, Re, Me and so on for the names of the notes. It's the method of music learning used in most schools. You can select Fixed or Movable Do according to your needs.

You begin by entering your name, age and level of ability – beginner, intermediate or advanced. The next stage is to sing into the microphone so *Claire* can evaluate your tessitura or voice range. These settings are saved to your personal file so *Claire* can monitor your progress and adjust the exercises to suit.

This is ideal for classroom work as every student can have his or her own file and settings. The results are saved in a User Log so you or a teacher can review your progress. *Claire* will even create an Intonation profile representing your ability to hear and produce pitches. It shows which notes you hear and sing well and how far you vary from the target pitch.

There is an excellent on-line tutorial which takes you through the main functions of the program. Basically, you see a set of notes on the stave and you have to sing them. According to the settings, *Claire* may sing a note and then you have to sing it. Alternatively, *Claire* may sing a complete phrase or just the first note of the exercise. When it's your turn to sing, a cute Mac with ears pops up! At the highest level, *Claire* doesn't sing at all.

> *She's a very friendly teacher and never raps your knuckles when you get it wrong...*

A visual indication shows if your pitch is correct, sharp, flat or way off. You can continue the exercise until you get it right or move on to another one.

As you work through the program, many of the instructions are spoken by *Claire* in an American female accent. She's a very friendly teacher and never raps your knuckles when you get it wrong, although you will occasionally hear a note (sorry!) of disapproval if she thinks you're not trying. Clever. If you have been practising an exercise for a while but not finished, *Claire* may suggest moving on to another one.

The program has a veritable host of customisation options. You can adjust the general pace of the program – that is to say the speed of the interaction between you and *Claire* – and if your computer has an FPU you can even adjust the tuning.

I have to say that I found the speech aspect of *Claire* very appealing. I suppose it has to do with the 'ultimate' computer which you can talk to, to give commands, and which will respond in the same way. But you can switch the voice off and revert to window prompts if you want to.

You may think a speaking and singing computer would be detrimental in a classroom but as the student has to sing anyway, the program will have to be used in relative silence.

Claire accepts input from the mic and is optimised for the human voice but you can use instruments as well. Future plug-in modules will be available, tailored for the mechanics of instruments such as the violin, cello and so on.

The only disappointment with *Claire* is that it doesn't contain any songs to practise and sing. However, it's still the best ear training program

JARGON BUSTERS

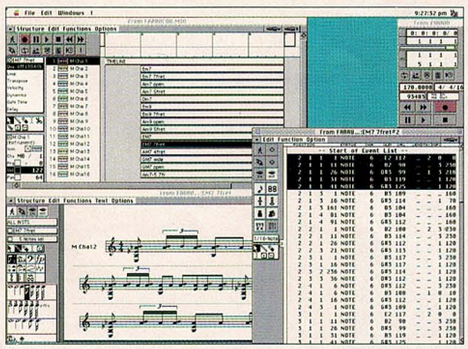
Fixed and Movable Do: in Fixed Do, each syllable is assigned to a fixed pitch so Do is always the C note, Re is always D and so on. This is the best system for developing perfect pitch and for building sight reading skills. In Movable Do each syllable is assigned to the same degree of the scale so in the key of C, Do is C; in the key of G, Do is G and so on. This is good for teaching relative pitch and harmony.

FPU (Floating Point Unit): a maths co-processor chip designed for number crunching. It speeds up maths-intensive operations (such as recalculating large spreadsheets) and *Claire* will use an FPU to speed up the recognition of your voice.

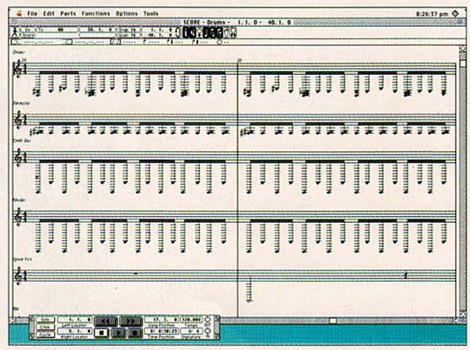
GM (General MIDI): an agreed way of arranging sounds in synthesisers and tone modules, so a MIDI file configured to GM will sound roughly the same when played on any GM instrument.

MPEG (Motion Pictures Experts Group): a standard for compressing video which results in faster and smoother digitised movies.

COMING TO AN ARRANGEMENT



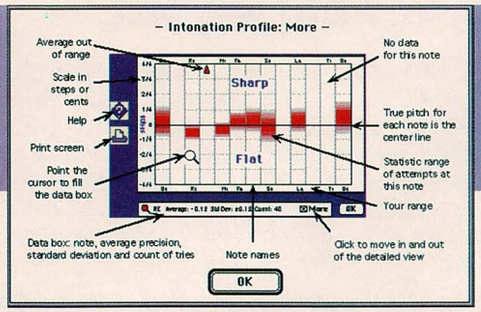
Latin: Farruca from *Latin Busker*. You can see from the event editor that the first chord has been strummed.



One of the complex and highly percussive *Dr Rave* files as it appears in notation format in *Cubase Lite*.

You can't be brilliant at everything. Even professional film composers use an arranger who takes their ideas and scores them for an orchestra. Using building block files is a similar idea. These are pre-programmed riffs such as drum patterns, bass lines, techno grooves and so on which you can use in your own music.

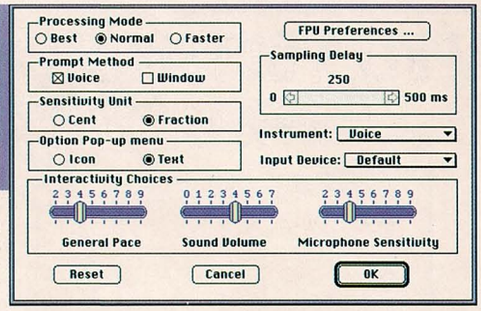
Two such disks landed on my desk this month. *Dr Rave* from Heavenly Music is the latest in a series which includes *Techno Grooves*, *Beat 'n' Bass*, *RamJam* and several


– Intonation Profile: More –
Average out of range
Scale in steps or cents
Help
Print screen
Point the cursor to fill the data box
No data for this note
True pitch for each note is the center line
Statistic range of attempts at this note
Your range
Sharp
Flat
Data box: note, average precision, standard deviation and count of tries
Note names
Click to move in and out of the detailed view
OK

Claire's Intonation Analysis tells you which notes you hit, which you miss and how far you're out.

The Tutorial leads you through the initial stages of *Claire*.

When you see the Mac with ears, it's time to sing! If you wait too long before starting, *Claire* 'll prompt you.



Claire has a large number of customisable options including settings for the way the program interacts with you.

I've yet seen on any computer platform. It's suitable for all ages – children in particular will love the voice. If you're struggling with your music oral – or should that be aural? – take some lessons from *Claire*. *Ian Waugh*

CLAIRE

Claire costs £149.95. More from MCMXCIX, 9 Hatton Street, London, NW8 8PR. Tel: 081 963 0663. *Claire* requires a 68020 (LC) Mac or higher, running System7 with 2Mb RAM (4Mb is recommended). You also need a digitiser – ie the Mac's built-in microphone – but the program will work with MacRecorder, VoiceRecorder and other mic/digitiser add-ons.

Ease of use Just plug in and sing.	85%
Documentation Excellent on-line tutorial.	92%
Features Has everything but songs.	82%
Value for money Fully-featured, with a price to reflect this.	80%
MACFORMAT RATING	84%

MAC MUSIC NEWS

■ Apple has updated *QuickTime* to V2.0. As well as supporting MPEG video compression, its music capabilities make it easier to synchronise music and video, and *QuickTime* music tracks promise to be much smaller than standard CD tracks.

■ Steinberg has created special education packs of *Cubase Lite* and *Cubase Score* with interactive tutorials. They include the program and manual plus an educational booklet, two tutorials and a disk of music.

In Tutorial 1, examples are presented in worksheet format combining basic sequencer tasks with multiple-choice questions testing notation, music rudiments and general listening skills. It's aimed at ages 11-14. Tutorial 2 is for *Cubase Score* and in addition to musical examples, it contains on-screen notes about composers and musical styles. It's aimed at ages 14 and up.

■ More Steinberg – the *Cubase Music Starter PACs*, which contain everything for the newcomer to music. They include *Cubase Lite*, a MIDI interface, on-line expert help and a song disk. *Lite* is GM/GS compatible and the expert help is provided by a HyperText application called *MIDI Xplained*. The *PACs* are £159 from Harman Audio on 081 207 5050.

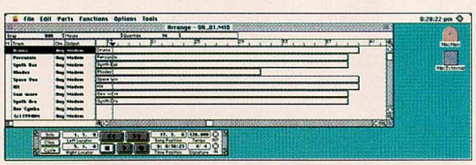
■ Opcode has released a new MIDI interface for the Mac, the *Translator Pro,* which replaces the *Studio 2*+. It has 2 Ins and 6 Outs and can address 32 separate MIDI channels with suitable software. It draws its power from the serial port and has status LEDs. Thru switches allow a modem or printer to be permanently connected and switched between at will. It costs £129.95. More from TSC on 071 258 3454.

■ Arboretum Systems has released a real-time effects processor called *Hyperprism*. You can process sounds by applying filters, modulation, delays and spatial effects to a Sound Designer or AIFF sound file. It will cost £411.25. More from TSC on 071 258 3454.

volumes of *Dr Beat*. It contains 12 Rave grooves configured to GM.

They are all around 48 bars long and contain lots of drums and percussion plus some great sound effects and analogue-type sounds so popular in Rave. The programmer has done very well to get these sounds out of a GM module. In fact, as the on-disk docs point out, rhythms such as Rave, Acid, House, Club and so on are not new. It's the sounds the rhythms use which give them their style.

To incorporate the grooves into your own material, use your sequencer's cut, copy and paste facilities. You can use individual instrument lines or parts of the complete grooves.



The *Dr Rave* patterns contains eight or nine instrument parts, each on its own track for ease of editing.

MIDI Busker Latin Guitar is the latest in the MIDI Busker collection of guitar riffs, which includes Acoustic and Electric Guitar. The files contain Latin rhythm patterns – surprise, surprise – recorded using a MIDI guitar so they sound pretty authentic. If you've ever tried to create a guitar riff using a keyboard, you'll know how impossible it is.

The disk contains ten Latin styles – Bossa Nova, Colombiana, Farruca, Guajira, Gyprumba, Latin Rumba, Milonga, Milonga Rumba, Rumba Guajira and Samba. You don't have to be on intimate terms with the rhythms to appreciate the patterns. Some of these'd make Carmen Miranda drop a banana!

To use them, you use your sequencer's cut, copy, paste and transpose functions. The files are configured to GM and come with full on-disk instructions.

When ordering, be sure to say you want a Mac-compatible disk.

DR RAVE

Dr Rave is £16.95 plus £1.50 p&p from Heavenly Music, 39 Garden Road, Jaywick Village, Clacton, Essex CO15 2RT. Tel: 0255 434217.

MACFORMAT RATING 80%

LATIN GUITAR

MIDI Busker Latin Guitar is £14.95 from Station Records, Station Road, Sudbury, Suffolk CO10 6SS. Tel: 0787 311500.

MACFORMAT RATING 82%

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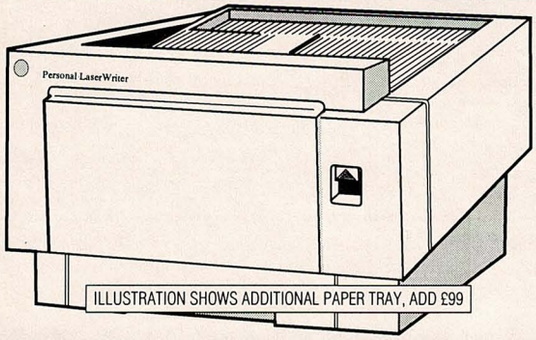

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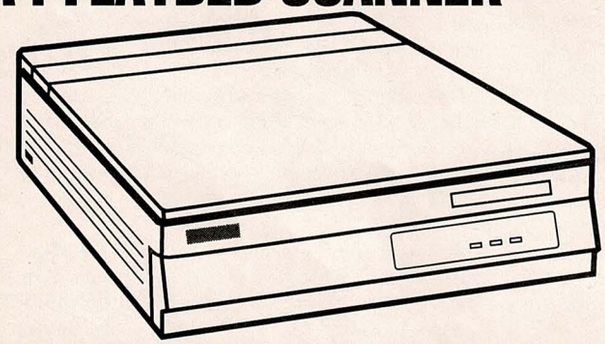

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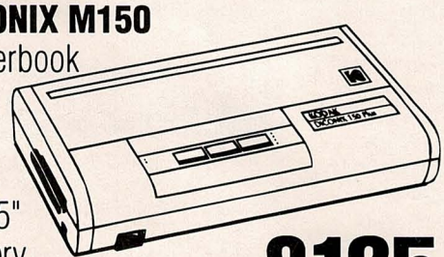

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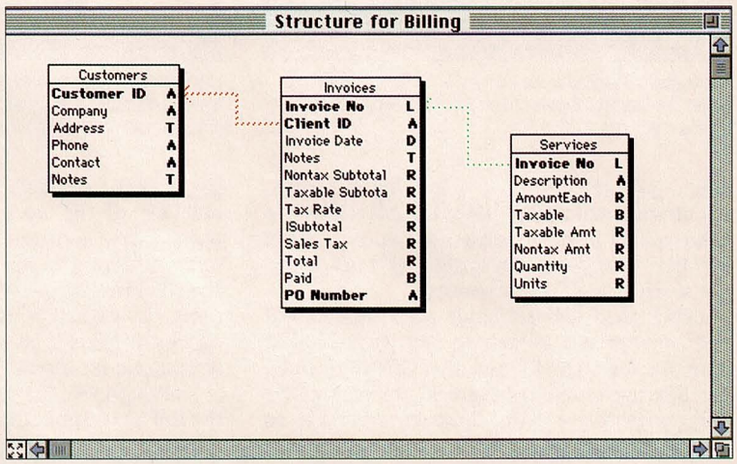
First in the field

4D First is a relational database that would be a bargain at twice the price – just £99, if you're quick. Discover what makes it so special...



4D First's Structure window is where you set up relational links between files and get an overview of the whole database. As friendly as you could hope for in a relational database.

There's a widely held belief that database software is like hi-fi or malt whisky: something that you should upgrade as your knowledge and tastes develop. Frankly, that's a load of tosh. If you need a multi-user relational database, you need it even if you're not sure what it is. Conversely, if you're happy with *ClarisWorks*, you'll do yourself no favours by scrapping it for something more costly and more complicated.

Having said that, there are many Macintosh users who have been forced by the price and impenetrability of high-end database programs to settle for less than their ideal. What they need is an affordable application that provides all the flexibility of a professional relational database with the simplicity of a familiar Mac interface. Pie in the sky? Not any more.

4D First is a simplified version of one of the Mac's top relational database development tools, *4th Dimension*. Its interface is second only to *FileMaker Pro*, it has some of the best manuals in the business and, if you hurry, it's yours for under a hundred quid.

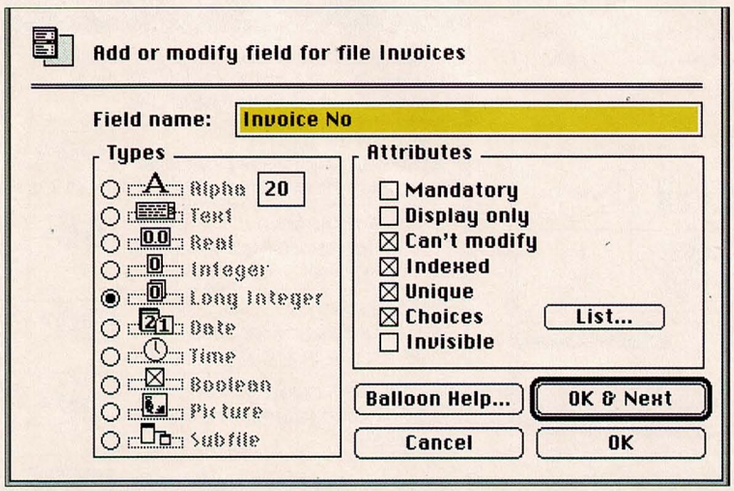
Considering the facilities it offers, *4D First* is remarkably easy to get started with. Just as in *ClarisWorks* or *FileMaker*, you begin by defining the structure of your database – specifying the names and types (text, number, date, etc) of the fields you need. Because this is a relational program, you can also create several files within your database and establish links between them. If you've never used a relational database before, this can be something of a conceptual hurdle, but *4D* handles it more simply and clearly than any other relational program. All you do is go to the **Structure** window and drag between the matching fields in any two files. It's a simple graphical operation, and if you do happen to get it wrong, you can easily remove the link and try again.

The next step is to design some layouts for entering, browsing and printing your database records. The layout environment provides a good range of graphical tools – it's not quite as neat as *FileMaker Pro's* version, but it does add some welcome features, including more colours (256 as opposed to 88), support for multi-page forms (very useful if your screen is too small for your records) and various graphical objects, such as thermometers and dials, for entering or displaying values. There's also a range of pre-programmed buttons for entering or deleting data, navigating between records and flipping the pages of multi-page forms.

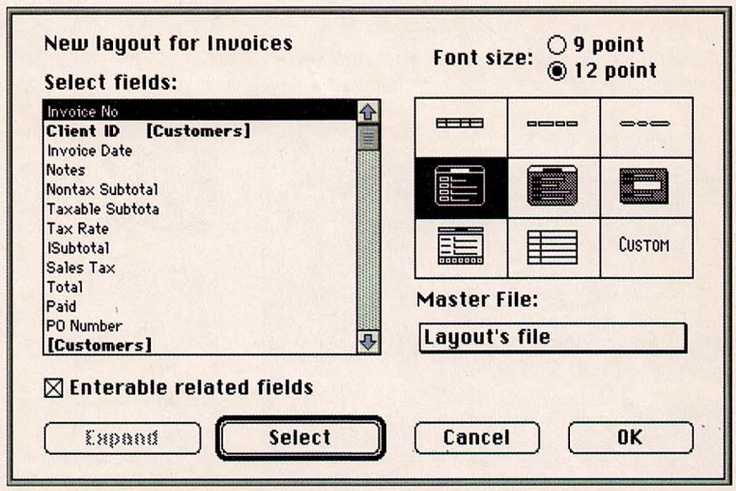
If you don't fancy creating layouts from scratch, *4D First* provides eight well-designed templates, some of them complete with buttons. Just click on the one you want, and it will automatically create a layout to suit your specific fields. Using these layouts, it's possible to produce a working database literally in a couple of minutes. And you can always modify the design later if you want to.

To display data from related files, you need to place so-called 'Included Layouts' within your form. These provide a scrolling list of selected fields from any related file. *4D* handles all the relational stuff automatically, even down to letting you double-click on an included layout in order to go directly to the related file for entering data there.

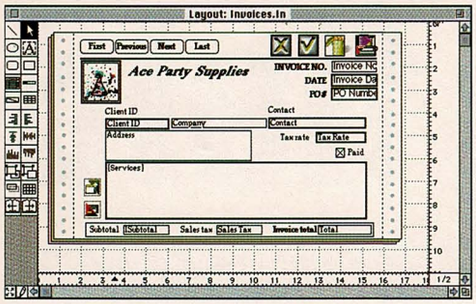
4th Dimension has always had good facilities for sorting and searching and *4D First* hangs on to all those. It's not the fastest of database programs, but is better than many. Like *FileMaker*, it lets you put search criteria into a layout, but it also provides a more conventional search



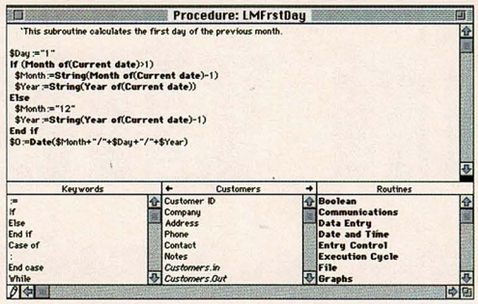
4D First provides a wide range of field types and good options for data validation and formatting. You can even create custom Balloon Help instructions for any field.



Eight templates are built into *4D First* for automatic design of form and list layouts. Alternatively, you can click on **Custom** and design one of your own.



The Layout window provides the tools for designing forms. Notice the included layout called [Services] – this displays related data from another file.



The Procedure Editor is where you write scripts and other types of procedure. The example shown here is a global procedure which defines a calculation formula.

editor, plus the ability to search by formula – say, if you want to find those records where the value of one field is less than the square root of another. That's a useful facility, and one that's not so easily available elsewhere.

Other good points include the Quick Report and Label editors (which do pretty much what their names suggest) and the Graph module. *4th Dimension* and its simpler sibling are the only mainstream Mac database programs to provide in-built graphing facilities. They won't put dedicated graph programs out of business, but they're more than adequate for most purposes and certainly easier than having to export your records into a spreadsheet. If you do need to exchange data with another application, *4D First* offers decent import/export options, albeit not up to *FileMaker's* standard.

Write-it-yourself

Like *4th Dimension*, *4D First* is equipped with a programming language for writing procedures which can be attached to individual objects, such as buttons, or to particular files and layouts. You can also define global procedures which set up actions that are available anywhere. To make full use of the language will certainly take some practice – a bit of programming experience won't come amiss here – but it's really not that difficult to script basic button actions or to set up simple calculations. If you've tackled calculated fields in *ClarisWorks* or used *FileMaker's* script commands, *4D First* won't come as much of a shock.

Fortunately, *4D* has always had excellent documentation and this carries over to *4D First*. The one big difference is presentation. Instead of the hefty package of books and ring-bound paper that comes with *4D*, you get just a few pocket-sized booklets to start you off. The remainder of the documentation – and that's most of it – is in the form of page images on disk. At a pinch, you could read this on the screen, but it's not really an on-line sort of thing. Your best bet will be to buy a fat pack of paper and print it all out as a DIY manual. But be warned: it's around 1,000 pages in all!

Although *4D First* is a cut-down version of the full £750 application, what's been left out is unlikely to bother anyone except professional database developers (and they can afford the real thing). Among the things you lose are some of the more specialised programming features, the finer points of multi-user security, communications commands and the ability to roll your own code in languages like C or Pascal. There are only two real shortcomings you're likely to notice in day-to-day use. First, the programming system does not support the Clipboard, so you can't just cut data from another package and paste it in here. Second, if you've created a new file, or defined a new field within a file, and change your mind, there seems to be no direct way of simply deleting it.

For small business and home use, this is the bee's knees, and it faces no competition in this price range.

Naturally, there's full upward compatibility, so that if you ever do graduate to *4th Dimension*, you'll still be able to use all your old database work. What's really unusual about *4D First* is that it's also downward compatible – capable of running any database created in *4th Dimension*, even with all the advanced features that aren't supported by *First*.

The big question is, should you buy it? Frankly, at £99 it's very hard to think of a reason not to. You get vastly more power, and only slightly less intuitive simplicity, than with *FileMaker Pro*. And for much less money. Professional database people argue endlessly about the relative merits of *4D*, *Omnis 7* and *FoxPro*, but those arguments are only relevant if you are considering serious programming or access to complex networks and corporate mainframes. For small business and home use, this is the bee's knees, and it faces no competition in this price range.

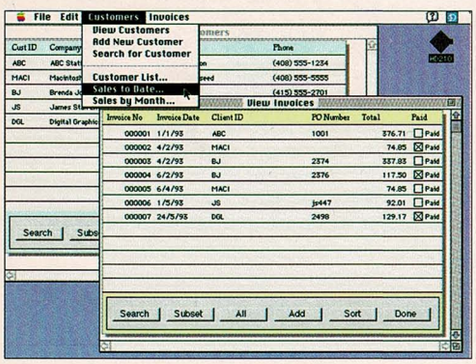
If you already use *FileMaker Pro*, you may want to wait for its relational version, which is said to be under development for release next year. No doubt that will be excellent, but it's not here now. One big virtue with *FileMaker* is that it was conceived as an 'end-user' program, so its design environment is beautifully neat and simple. *4D* on the other hand has always been a tool for the professional developer – it's capable of producing superbly smooth results, but these are achieved through a slightly more utilitarian design interface. However, that's not likely to be a big issue. If you're ready to step up to relational work, *4D First* is as good a way in as you'll find.

Jack Weber

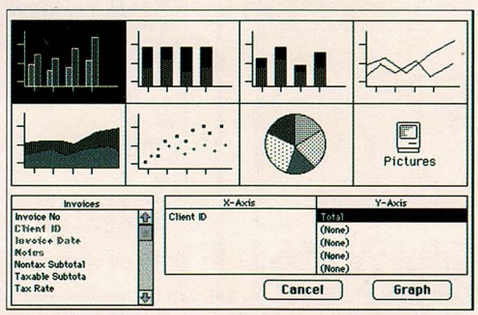
Jargon Busters

Flat-file: a database in which all the records are arranged as a single sequence, rather like a card index.

Relational: a database that incorporates several separate data files which are linked (related) to each other. This prevents duplication of entries and makes updating easy. For example, in a database of staff records, many employees will share the same personnel officer. Set up related files for Employees and Personnel, and you can simply link each employee to the appropriate record in the other file.



And here we have a completed *4D First* relational database including custom menus, layouts and buttons.



The Graph module lets you specify data from one field as x-axis categories and data from another as the y-axis values. There's less flexibility here than you'd get in your average spreadsheet, but it's a useful extra all the same.

4D First

4D First is available for £99 from selected dealers until 31st May 1994. After that, it will cost £195. More information from ACI UK on 0625 536178.

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Documentation 90%
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Features 92%
Many features that you won't find elsewhere, upgradable to *4th Dimension*.

Value for money 99%
At £99, you can't complain; even at £195 it's ace value.

MACFORMAT RATING 93%

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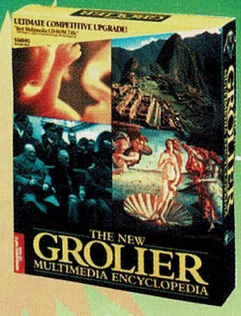

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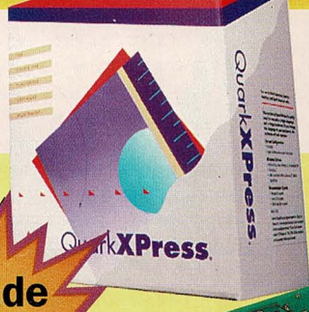

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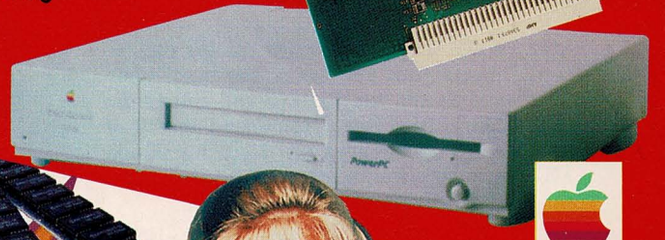

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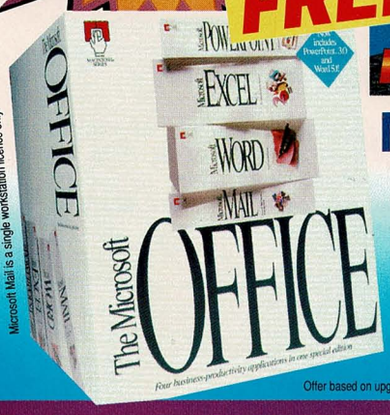

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Colour Correction

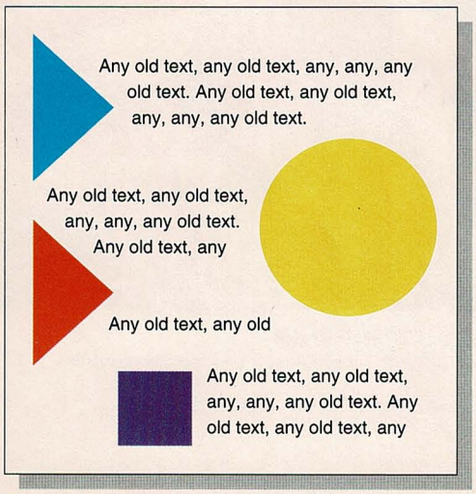
If the medium is the message, then colour is the language it speaks. MACFORMAT guides you through the wonderful world of colour coding.

Anyone who wants to make pages and posters attractive and attention-grabbing needs to use colour to inject that little bit of life into their layout. A poor use of colour, however, can have horrendous results – and can even detract from your message. That's why MACFORMAT consulted its design experts to bring you 25 tips that'll help guide you the minefield of colour coordination.

1 Use bright, eye-catching colours to emphasise the most important elements of your page or poster. Colour isn't just about making a page look nice, it's about clearly conveying your message.

2 Use colour to highlight warnings, instructions and any vitally important information. Your reader's eye will naturally be drawn towards a coloured object.

3 While strong, aggressive colours can reinforce your key points, too many vivid colours can tire the eye and clutter the page. Concentrate bright colours so that they only cover small areas of the page; this should avoid an overpowering effect. Use softer tones for secondary or supporting information.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Any old text, any old text, any, any, any old text. Any old text, any
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Any old text, any old text, any, any, any old text. Any old text, any old text, any

Don't use too many sharp colours, they clutter the page and detract from your message.

4 Colour can be used to give your publication or presentation a sense of structure. Using a specific colour consistently throughout your work will effectively label certain types of information. For instance, you may wish to use the same colour whenever you begin a new section or chapter, with a different one for warnings or instructions. This helps to break the material down and draw the reader's eye from one section to the next. Once you've established a pattern, don't change it – you'll only confuse your reader. These patterns are called colour coding, and they can give your work personality, particularly if you choose a group of colours which are in harmony with the content of your work.

STEP 1	Any old text, any old text, any, any, any old text. Any old text
TIPS	Any old text, any old text, any, any, any old text. Any old text
WARNING	Any old text, any old text, any, any, any old text. Any old text
EXTRA!	Any old text, any old text, any, any, any old text. Any old text
STEP 1	Any old text, any old text, any, any, any old text. Any old text
TIPS	Any old text, any old text, any, any, any old text. Any old text
WARNING	Any old text, any old text, any, any, any old text. Any old text

A colour coded page might look something like this – except a good deal bigger, of course.

5 Colour coding should be planned in advance. Introducing a random colour every time you encounter a new category or section will only confuse the reader.

6 If you design pages or posters for the same audience regularly – if you publish a fanzine or newsletter, for instance – then try to stick to the same colour code from one issue to the next. This will save you time and give your work continuity and identity. Readers will usually find information easier to absorb, if they're familiar with its format.

7 Too many different colours will detract from your original message and ruin your page or poster design. The optimum number of colours is four (most readers won't associate with more than that). If you use more than four colours, pages become less meaningful and the colour coding redundant.

8 Use a bright and contrasting colour to indicate a sharp change in direction or topic. This will prepare the reader for something new, but do bear in mind point 7!

A contrasting colour can be used to indicate a change of tone or to introduce something new. Such a contrast can be worked into a regular colour scheme – to indicate a change of language in a multilingual document, for instance.

...The same old boring stuff

...The same old boring stuff

But not today! Now things are different...

9 If your document is going to be photocopied at any stage – a prime example being invoices or business forms – avoid using light blue. It doesn't photocopy well, and can lead to costly gaps in the copied page.

10 If you are using colour on a page, try to counterbalance its effect by creating areas of white. A lack of white space around coloured objects can give the page an ugly overall appearance.

11 The same rule applies even if you're using a coloured background. Background – or negative space – should be used to separate and distinguish the colours which are being used to represent different themes or types of information.

12 Always think twice before using a rich or dark coloured background. A mass of colour can overwhelm the message. Backgrounds should generally be pale, so that the brighter or richer colours can highlight the message.

Does this text say something important, and can it be read clearly?

Remember, it's the message which is the most important thing.

A bright or richly coloured background suffocates the text. The words look clearer on a pale, subdued background.

13 Make sure text is easy to read by using a significantly different tone from its background. A difference of at least 30% in tone value is essential, but 50% is better. There is no better contrast than black and white. A lack of contrast will strain the reader's eye. (See our Design feature in MACFORMAT issue 12.)

14 Avoid using very bright colours for any lengthy or complicated sections text. They tend to confuse and tire the eye. Reading shouldn't be hard work!

Try reading this!

Or this,

or even this.

Black text is much clearer.

Brightly coloured text is difficult to read when used against a pale or white background. If clarity is important, try to use black on white.

15 Use large, simple and bold typefaces for coloured text. If the letters are too small or too condensed, they will be hard to read. Be careful though: if the typeface is too bold it may detract from your original message.

16 Beware of the strange colour vibration caused by the complementary colours red and green; yellow and purple; and orange and blue. Always keep them well apart. If two complementary colours must appear together, make one much darker than the other.

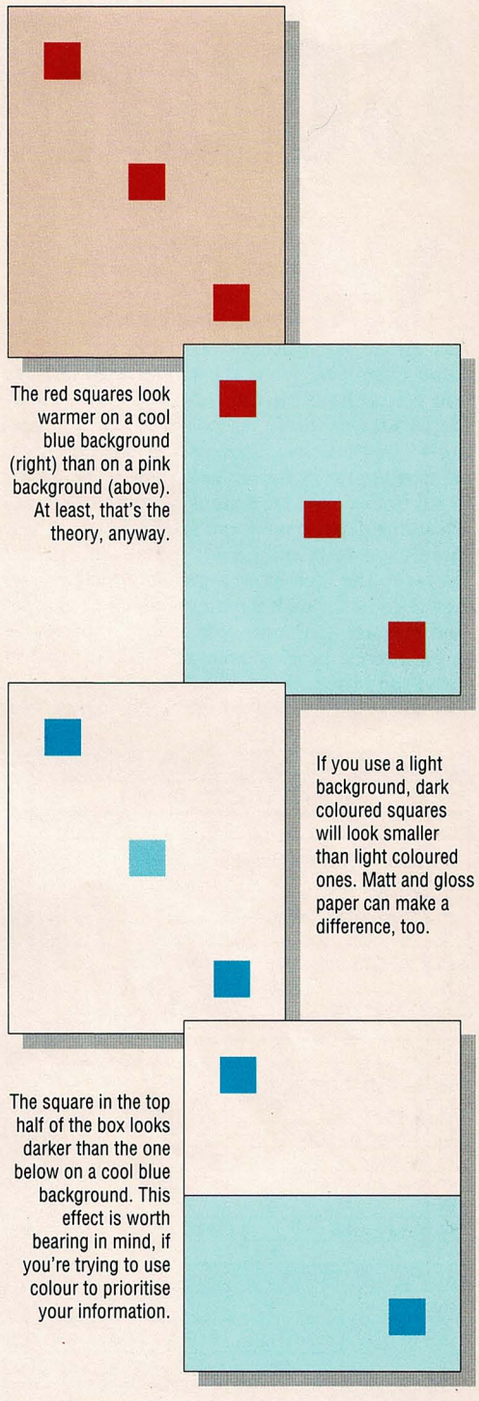
17 Remember the relationship between light and dark, and warm and cold colours. The same colour looks darker on a light background and lighter on a dark background. It looks warmer on a cold background and cooler on a hot background. A shape seems smaller on dark background and larger on a light one. The texture of the paper can also play a role. Dark colours tend to look darker on matt paper and light colours lighter. Experiment with different kinds of paper to get the effect you want.

18 Black and white photographs usually look best left in true black and white. Printing them in process black and greyscale gives them a washed out look. If a black and white photo is the main element of a page, poster or transparency, be careful how you use colour on the rest of the page. Too much colour will undermine the photograph. If you want to experiment with adding colour to monotone images, two superimposed colour halftones of a black and white picture can be highly effective. You should avoid using a single sheet of colour, however, as this tends to weaken the image. (For some ideas about applying different spot colours see MACFORMAT issue 10.)

19 If you're attempting to design a poster for maximum visibility, then try one of the following background colours: yellow, orange, yellow-green and orange-red (vermillion).

20 Statisticians tell us that 8% of men and 1% of women are colour blind in some way. Red and green cause most problems for sufferers, so it's advisable to use middle tones with these particular colours. Avoid red on a green or grey background and vice versa. The safest colour is the universally recognisable blue.

Lucky 21. Always think about the sort of impact you're trying to make, and the audience you're trying reach (there's no point using pastel shades on a poster advertisement). Oh, and ignore one or all of these tips, rather than produce an ugly document. *Gordon Druce & Garrick Webster*



The red squares look warmer on a cool blue background (right) than on a pink background (above). At least, that's the theory, anyway.

If you use a light background, dark coloured squares will look smaller than light coloured ones. Matt and gloss paper can make a difference, too.

The square in the top half of the box looks darker than the one below on a cool blue background. This effect is worth bearing in mind, if you're trying to use colour to prioritise your information.

COLOURING YOUR JUDGEMENT

Don't forget, all colours carry cultural and symbolic meanings.

1 Black is associated with strength and elegance, but it can also signify witchcraft, evil and the unknown – like outer space. White has traditionally symbolised purity, cleanliness and virginity. It is the colour of heaven, angels and clouds. It's also associated with weakness and timidity.

2 Today, green is associated with the environmental movement and represents things which are good, wholesome and earthy. Green also means go, or situation normal. It is also the colour of jealousy, however, so beware. Its counterpart, red, represents anger, passionate love, and sometimes lust or sin. Blood and hellfire are red, as are danger and emergency. Red also means stop, pay attention.

3 Blue means cold, although it also signifies sea and sky. It's conservative, both politically and otherwise. Blue is serene, calm and still. Additionally, it can indicate sadness or suffocation. Erotic cinema is blue. For designers, blue is a mainstay colour. Blue can go with almost any other colour. Orange, on the other hand, signifies warmth and caution. It is associated with sunset and citrus fruit. The Man from Delmonté likes a good orange. It is a cheerful, positive colour, which was widely used during the '70s.

4 Purple is wealth, opulence, honour and royalty. It's also associated with pomp and ceremony. Yellow, purple's counterpart, can signify sunlight, and is usually used to liven things up. It usually looks better on black than white does. Some yellows, however, can indicate illness and decay.

Counting the cost

Take advantage of your spreadsheet's powerful financial functions to find out how much that loan repayment scheme is really going to cost you.

All the spreadsheet applications from the module in *ClarisWorks* to the mighty Microsoft *Excel* provide very similar sets of financial functions. In this article we will explain, with the help of some examples, what these functions do. We will concentrate on the functions provided by *ClarisWorks* as these are also found in most other applications. However, there are occasions when these are not sufficient.

All the financial functions in spreadsheet applications depend on some simple ideas of how interest on cash amounts is calculated. All this relates to the idea of an annuity, which is a series of constant cash payments made over a period of time. Any form of loan is an annuity, as is an interest bearing account. To fully understand the terminology used by spreadsheets we will have to introduce a little mathematics. You do not need to understand the mathematics (or where it comes from) but you should try to understand how all the terms introduced relate to each other.

Maths behind annuities

Imagine we want to buy a new Macintosh and having browsed the Apple Direct Catalogue we find a system that is going to cost £2,400. Now stretching our imagination further, we find someone who is willing to lend us the money but not charge any interest. We are to pay the money back monthly over two years and we can obviously see that this will cost £100 per month for 24 months.

When calculating an annuity, we call the amount at the start the Present Value (which we shall abbreviate to PV) and the amount at the end the Future Value (or FV). In the example above, PV was £2,400 and FV was £0. Each month a payment of –£100 (written PMT) was made and the number of payments (written NPER) was 24. These values are then all related by the formula

FV = PV + (PMT*NPER)

Unfortunately, things are never that easy. Firstly, there is interest to be paid, which is calculated on the basis that 'interest is paid on interest'. Say £1,000 is invested at an interest rate of 10% a year. Then at the end of the first year our investment is worth £1,000 plus £100 interest. At the end of the second year, we get interest on £1,100, which is £110, giving £1,210 and so on. This method of calculating interest is called compound interest.

Secondly, loans are more complicated than this because as payments are made, the value of the loan is reduced and the amount of interest charged must go down. To make it more complicated, it is important to note whether

S&L Example (SS)

B7 =FV(B2;B3;0;-B5)

	A	B	C
1	**Savings Example**		
2	Interest rate	5.50%	
3	Number of periods	5	
4			
5	Present value	£ 1000.00	
6			
7	Future value	£ 1306.96	
8			
9			
10	**Loan Example**		
11	Interest rate	8.50%	
12	Number of periods	15	
13	Payment	£ 5000.00	
14	Present value	£ 50000.00	
15			
16	Future value	£ 28825.80	
17			

100

1 The top half of the spreadsheet calculates the future value of £1,000 which is invested for five years at 5.5%. The formula used to calculate the Final Value in B7 is shown. In the bottom half of the spreadsheet, the same function is used to calculate the value of a £50,000 loan after 15 years. These values are close to those for a repayment mortgage over 25 years and say that after 15 years, you'd have to pay over £28,000 to pay off such a mortgage.

Interest rate example (SS)

B2 =RATE(100+(100*B1);100;12)

	A	B	C
1	Annual interest rate	21.60000%	
2	Monthly interest rate	1.64308%	
3	Daily interest rate	0.05359%	
4			
5			
6			
7			
8			

100

2 Using the RATE function, we have calculated the monthly and daily interest rates. These would give the same growth as an annual interest rate of 21.6%.

Apple Credit (SS)

B7 =PMT(B5;B3;-B2;0;0)

	A	B	C	D	E
1	APR	21.60%			
2	Credit amount	£ 1500.00			
3	Number of payments	24			
4					
5	Monthly interest rate	1.64%			
6					
7	Monthly payment	£ 76.14		Payment in Catalogue	£ 86.90
8					
9	Factor	0.05076		Factor	0.05791
10				Factor * Amount	£ 86.86
11	Total tp pay	£ 1827.27		Total to pay	£ 2084.76
12					
13					
14	APR	21.60%			
15	Credit amount	£ 1500.00			
16	Number of payments	36			
17					
18	Monthly interest rate	1.64%			
19					
20	Monthly payment	£ 55.53		Payment in Catalogue	£ 63.40
21					
22	Factor	0.05076		Factor	0.04225
23				Factor * Amount	£ 63.37
24	Total to pay	£ 1999.05		Total to pay	£ 2281.50

100

3 On the left of the spreadsheet, we have calculated the monthly repayments based on the annual interest rate shown in Apple Direct's catalogue. The highlighted cell (B7) contains the formula to calculate the monthly payment from the monthly interest rate. On the right are the figures for payments from the catalogue. We have included calculations to check the numbers in the catalogue, which have been rounded off to the nearest ten pence.

JARGON BUSTERS

Annuity: either a loan or an investment which attracts interest and can have regular payments associated with it.
Compound interest: the way in which an amount attracts some interest for a period so that in the next period the interest is calculated on the original amount *and* the interest for the first period. The idea is that there is 'interest on the interest.'
Function: a named operation available in a spreadsheet application. Examples include arithmetic functions like '+' and those for financial results discussed here.
Future value (FV): the value that a sum of money invested at compound interest will have after a specified period.
Interest rate (RATE): a percentage by which the present value of an annuity increases in a period which could be a number of days, months or years.
Number of Periods (NPER): when you are calculating the future value of an annuity, this is the number of times interest is calculated. For a loan to be paid off with monthly payments over three years, there are 36 periods.
Payment (PMT): the payment made into an annuity. For a loan this is the money to pay off the loan.
Present value (PV): this is usually the initial value of the annuity before any interest is calculated or payments made.

payments are made at the beginning or the end of a period. Say £1,000 is borrowed at an annual interest rate of 10% and we are to make annual payments of £200. Interest is calculated at the end of the period, so if £200 is paid at the beginning of the year, then at the end of the year interest would be calculated on £800, leaving £880 to be repaid. If payments were made at the end of the year, then the loan would have risen to £1,100 and would be £900 after one payment. In spreadsheet calculations, whether the payment is made at the beginning or end of the period is referred to as the 'type' of the annuity. Usually the type is an argument to a function that works on annuities and is either 1 or 0. Usually 0 denotes that the payment is made at the end of the period and 1 denotes that payment is made at the beginning. Most spreadsheet applications make this argument to functions optional and when omitted it defaults to 0. Unfortunately, most loans require payments to be made at the beginning of a period.

With all the above knowledge and some mathematics, we could relate all the above to give a single formula, Unfortunately, this formula is quite large and difficult to understand. However, in the above example we used names like PV and FV, which correspond to the names of spreadsheet functions. Therefore, if we know some of the values, the spreadsheet can work out the rest.

For example, say we want to know how much £1,000 will be worth in five years time, if we invest it at an annual interest rate of 5.5%. What we want to know is the Future Value, so we must use the FV function. In *ClarisWorks*, this function takes up to five values: the interest RATE, which is 5.5%; the Number of PERiods (NPER), which will be five; the payment, which in this particular case will be zero; and the present value, which will be 1,000. The same function can also be used to calculate loans, which is where the payment argument is used. Picture 1 shows various uses of the FV function.

Caution: interest rates

As they say, interest rates can go up and down but they can also be calculated by devious means. You will often see annual interest rates quoted but payments are calculated on a monthly or daily basis. Unfortunately, the monthly interest rate cannot be accurately calculated from the annual interest rate by dividing by 12 because life's never that simple, is it? However, it can be calculated from the annual interest rate using the RATE function in *ClarisWorks*. This function takes as arguments the present value and a future value after a given number of interest rate periods. Therefore, if we start off with £100 and leave it for a year at 10% then it will be worth £110. To work out the equivalent monthly interest rate, we put these values into the RATE function with the number of periods set to 12. Similarly, setting the number of periods to 365 would return the daily interest rate (see Picture 2). However, take care when converting monthly interest rates to daily ones as the number of days in a month changes from month to month.

B4 =RATE(B2,-B3,B1,0,0)

Apple Credit Monthly Rate

	A	B
1	Credit amount	£ 1,500.00
2	Number of payments	24
3	Payment in Catalogue	£ 86.90
4	Equivalent monthly rate	2.82%
5	Equivalent annual rate	39.68%
6		
7	Payment check	£ 86.90
8		
9		
10		
11	Credit amount	£ 1,500.00
12	Number of payments	36
13	Payment in Catalogue	£ 63.40
14	Equivalent monthly rate	2.47%
15	Equivalent annual rate	34.05%
16		
17	Payment check	£ 63.40
18		

4 We have calculated the monthly interest rate which is equivalent to the repayment figures in the Apple catalogue. The equivalent annual rate was calculated using the FV function to work out how much £100 would be worth after a year at that monthly rate. The payment check is using the PMT function to calculate the payment from the monthly interest rate.

IN OTHER APPLICATIONS

All the functions shown here from *ClarisWorks* are available in almost identical form in other applications. As mentioned, the RATE function in Microsoft *Excel* is slightly different. Both *Lotus 1-2-3* and *Excel* have some extra functions to model more complex financial problems like depreciation and internal rates of return.

Apple Consumer Credit

Page 39 of the Apple Direct Catalogue contains information on Apple's credit scheme and presents most of the information we have seen above, but in a slightly different way. First of all, it presents a table which contains a factor which when multiplied by the total cost of a system gives the monthly payment. The table reads as follows:

Number of payments	Factor	APR
24	0.05791	21.6%
36	0.04225	21.6%

The catalogue then gives an example of what this means for a system that costs £1500:

Number of payments	Monthly payment	APR	Total amount payable
24	£86.90	21.6%	£2084.80
36	£63.40	21.6%	£2281.50

There is a problem with the above. The payment, which is calculated by multiplying the factor by the amount, includes credit protection insurance. It would be interesting to know how much the monthly payment would be without this insurance. In Picture 3, we check out these figures to see what this payment would be. The important thing to notice is that the cost of the credit protection insurance is over £12 per month, when borrowing £1,500 over two years.

Excel to the rescue

Having found the cost of a repayment to Apple Credit without the credit protection insurance, it would be interesting to know what the interest rate equivalent to the payments in the catalogue is. Unfortunately, *ClarisWorks'* RATE function cannot work this out, but the RATE function in Microsoft *Excel* can. *Excel's* RATE function can take a payment argument and therefore we can ask *Excel* to work out the interest rate for a loan. In Picture 4, we have done this for Apple Consumer Credit with payment protection and the results are rather surprising. Of course, you are getting something for the extra...

We have seen how various financial functions can be used to great effect to help you understand the maze of savings and loans, and to uncover the hidden cost of credit protection insurance. Calculating all the various ins and outs of loan repayments and savings is precisely what spreadsheets excel at (forgive the pun) and it means that you can find out exactly what things should cost, rather than relying on the raw figures which appear in some company brochures.

Simon Cox & Greg Morrison

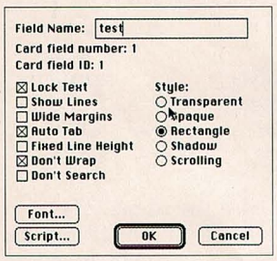
Property boom

Alter field sizes, fonts, button hilites, text styles and more, all within HyperTalk scripts. How? By modifying *HyperCard* objects' 'properties'...

HyperCard consists of 'objects'. Stacks, backgrounds, cards, fields and buttons are all 'objects'. And these objects have 'properties'.

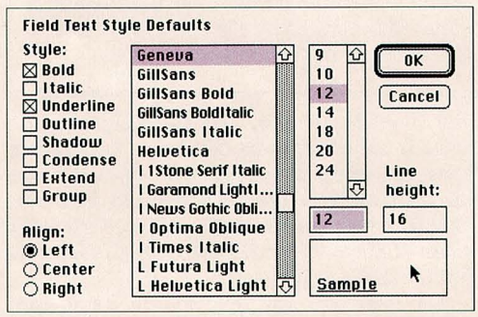
Field properties

Try selecting a field with the Field tool and then looking at the **Field Info** dialogue. You'll



See all these options in the **Field Info** dialogue? You can set them all in a HyperTalk script, too. So you could create a new field, set its style, margins and other properties all in one go.

see a list of check boxes allowing you to modify the field's characteristics. These are the 'properties' of that field. Try clicking on the **Text Style...** button. You'll see more check boxes allowing you to choose the default style. And a scrolling list of fonts. These are properties, too.



You can also set a field's text font, size, style, alignment and so on with HyperTalk commands.

You can modify the properties of *HyperCard* objects using the **Set** command. For example:

```
set the textFont of field 1 to Chicago
set the textStyle of field 1 to bold
set the textAlign of field 1 to centre
```

Using these three lines in a script will alter the properties of field 1 without you having to go through the **Field Info** dialogue.

There are other properties which are simply 'on' or 'off'. 'Show Lines' is set to either on or off, as is 'Lock Text' and 'Fixed Line Height'. You set these using the words 'true' and 'false'. For example:

```
set the lockText of field 1 to true
```

This line will lock field 1 so that you cannot edit it until you unlock it again.

You may also have spotted something else. The HyperTalk words describing these properties are the same as the words used in the **Field Info** dialogue, only without the spaces. So that Text Align becomes 'textAlign', and Fixed Line Height becomes 'fixedLineHeight'.

The capital letters used in HyperTalk keywords are not significant, by the way – they're there just to improve legibility. So 'fixedLineHeight' could equally well be typed 'fixedlineheight' – it's all the same to HyperTalk.

There's no space here to go into detail, but properties are pretty simple things, and here's a list of useful field properties that shouldn't require any further explanation – (T/F) in brackets means that the property is either True or False:

```
autoTab (T/F)
dontSearch (T/F)
dontWrap (T/F)
fixedLineHeight (no.)
lockText (T/F)
name (string)
sharedText (T/F)
```

YOUR *HYPERCARD* QUESTIONS ANSWERED

Q Andrew Robb of London has a query about shared stacks: "I have a simple *HyperCard* (v2.2) stack running on my office LocalTalk network. The stack carries a list of names and addresses. I would like the stack to be accessible (read-only) simultaneously by several users on the network, so I have locked the stack using Finder. It is now accessible simultaneously as required.

"My problem is that the stack uses a simple scripted search function which relies on 'marking' particular cards according to the user's search requirement. When the stack is locked, the 'Marked Card' flag is also locked to whatever it was prior to locking. So the search function does not work. The stack does not crash at that point in the script, it just brings up the same set of marked cards every time.

"Is there a way around this particular problem, other than by using a separately defined card flag? I would really like to continue to use the 'mark card' command as it is very fast."

A An excellent question! Although *HyperCard* stacks can be shared on a network, if more than one user is to have access simultaneously, you do indeed need to lock the stack. However, this means locking all its properties too. In fact, users will not be able to edit or modify the stack in any way, which makes producing a conditional search function impossible.

My first reaction was to suggest a modified script which didn't try to mark the relevant cards but instead returned their names. These names could then be assembled into a list. This would work fine – except for one thing. Once you've got your list, where do you store it in a stack that you can't modify?

You can't, of course, so my only suggestion is a slightly more complicated one. Each user needs a simple 'access' stack. This stack could have just one or two buttons and one field. One of the buttons (the 'search' button) checks the cards in the shared database stack and every time it finds a card that meets the search criteria it adds its name to the field in the 'access' stack. The second button in this 'access' stack would simply revisit each card listed in the field.

If anyone's got a better solution than this, write in and tell us about it!

Q Mark Tennant, of Llwynygroes Tregaron, wants to use one of the bundled *HyperCard* stacks for his own special purposes.

"I have just undertaken to transcribe the journals of the former occupants of a historic house in our area and felt that *HyperCard,* and in particular the *Appointments with Audio* stack that came with *HyperCard,* would be an ideal format, since it could then be viewed on screen and also the text could be output for printing without having to type everything twice.

"I started doing this with version 2.1 of *Appointments with Audio,* but had to keep copy'n'pasting everything that went over two lines and the export file needed an enormous amount of editing even for the two

```
showLines (T/F)
style (named field style)
textAlign (L, C or R)
textFont (named)
textHeight (no.)
textSize (no.)
textStyle (named)
wideMargins (T/F)
```

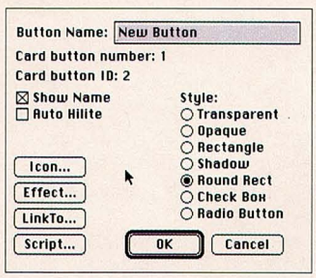
There are a few more, but we'll deal with those in later instalments as we come across them.

Button properties

You won't be surprised to find out that button properties work in the same way as field properties. Select any button, look at the **Button Info** dialogue and most of the options you can see there can be set within a script. Here's a selection of button properties that speak for themselves:

```
autoHilite (T/F)
hilite (T/F)
icon (choose an icon no. or name)
name (string)
sharedHilite (T/F)
showName (T/F)
style (named field style)
visible (T/F)
```

As with field properties, you can set button properties from within a script. So, for example,



As with field properties, button properties can be set within a script. Anything displayed in the **Button Info** dialogue can be set automatically.

THE STORY SO FAR

All you need to know to create your own Mac applications is how *HyperCard* works. Which is where this series comes in. In MACFORMAT 4 we began by asking what *HyperCard* is and touring the *HyperCard* 'components': stacks, backgrounds, cards, fields and buttons. In MACFORMAT issues 5 and 6 we explored the *HyperCard* menus and what the options do. Then in MACFORMAT 7 we turned to buttons and took a look at a button's 'script'.

Next came creating, customising and handling fields (MACFORMAT 8). 'Shared text', 'Lock text' and other options were explained. MACFORMAT 9 introduced Hypertalk, *HyperCard's* built-in programming language, as well as the 'domenu' command. And last issue we looked at intercepting *HyperCard* 'messages' and tracing the 'message path'.

If you missed any of these issues, turn to page 94.

you could set up a button which displayed a pop-up field (this demonstrates both field and button properties in action). Note how we change the button's name according to whether the field is visible or not:

```
on mouseup
  if the hilite of me is false
  then
    set the visible of field ¬
    "pop-up" to true
    set the hilite of me to true
    set the name of me to "on"
  else
    set the visible of field ¬
"pop-up" to false
    set the hilite of me to false
    set the name of me to "off"
  end if
end mouseup
```

For the above handler to work, the button's auto-hilite property must be off. You can set this via the **Button Info** dialogue. When you click on this button it does one of two things. If it's currently not hilited it (1) displays the pop-up field, (2) becomes hilited and (3) changes its name to "on". If it's already hilited when you click on it, it (1) hides the pop-up field, (2) becomes un-hilited and (3) changes its name to "off".

The above handler set the 'visible' property of the pop-up field to the 'hilite' property of the button. The 'name' property of the button is also altered.

Card properties

Yes, cards have properties too. Not as many as fields or buttons, true, but they are interesting. Here's a selection:

```
cantDelete (T/F)
cantModify (T/F)
dontSearch (T/F)
marked (T/F)
name (string)
```

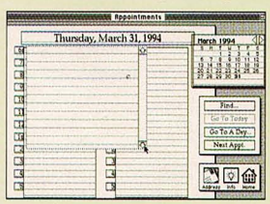
You'll see that most of these are simple true/false properties, and they should all be pretty self-explanatory. When would you use them? Well, say you had a large database of names and addresses, and you wanted to isolate those that you've typed so far. I therefore took another look at my old version 2.0 of *Appointments with Audio* and though the style and export look to be much more what I want, I am having to delete cards and create cards in order to go back through the years to where I want to be.

"This is rather tedious and though I've now created discrete stacks for the years 1994 back to 1980 I have to go back as far as 1890. I wondered if you could suggest a simple way for me to modify the stack so I could define the date limits of the stack at the time of creation, as is the case with version 2.1.

"I imagine this might be a simpler modification than changing all the input fields of version 2.1."

A The *Appointments with Audio* stack is a good starting point, because it saves you having to write scripts to generate new cards for each date. However, modifying the existing fields is easier than rewriting the stack script to handle dates the way you want it to. You don't even have to fiddle around with the fields – simply add a new one.

I'm assuming that you want a single text field for each day, so you can add a single scrolling field on top of the existing appointments fields – call it 'journal' and make sure you create it on the background layer.



Adding a single scrolling field to the standard 'Appointments with Audio' stack turns it into a useful diary, or journal.

Having done this, you need an easy export facility. To do this, create a background 'export' button with the following script:

```
on mouseUp
  put field "title" & return & ¬
return & field "journal" into export
  ask "Filename"
  open file it
  write export to file it
  close file it
end mouseUp
```

This uses HyperTalk's file-handling commands to create an ASCII file, write the date and the contents of the journal to it and save it again. ASCII files can be read and edited by any word processor. The file is saved to the same folder as the *HyperCard* application.

That button will export single pages into individual files. It would be easy enough to produce a version that could save whole stacks as single files. They would be a bit on the big side, though...

That's this month's mailbag sorted out. We'll be looking at more *Hypercard* techniques next month. So, if you need any *Hypercard* help, write to us at: Oh, those *HyperCard* problems, MACFORMAT, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

late people who lived in London. You could set up a small script to check the address field for the word 'London' and, if it's in the field, to 'mark' that card. These 'marked' cards can then be viewed. This simple handler can be placed in a button script to do just that:

```
on mouseup
  repeat with i = 1 to the number ¬
  of cards
  if "London" is in field "address" ¬
  of card i
  then
    set the marked of card i to true
  else
    set the marked of card i to false
  end if
end mouseup
```

The above script is interesting in a couple of respects. First, you'll note that it doesn't 'visit' each card in turn. This takes far too long, and it's quicker simply to refer to each card rather than go to it. Secondly, the line after the 'else' statement ensures that if any cards are marked from a previous exercise, they're unmarked if they don't fill the new search criteria. Alternatively, you could have used the following line right at the start of the handler:

```
unmark all cards
```

Background properties

With one or two omissions, these are the same as card properties. Certainly, all the properties quoted above for cards apply to backgrounds too – except for the 'marked' property. You can't mark an entire background.

How about more example uses? Well, let's imagine we have the same database of names and addresses used in the above example. Now, though, let's imagine this forms only part of a stack – that the name/address cards all share one background, while the rest of the stack is given over to a catalogue of products that you want to sell these people. The cards in this catalogue all share a different background. In other words you have a single stack containing two backgrounds and filling two functions.

Now, if you want to search for an individual's address, you don't want to have to search the whole stack. Similarly, if you want to search for a product, you don't want *HyperCard* plodding through all those names and addresses on the way, do you?

The solution is simple. Use a 'search' button with a handler that prompts you to choose which background you want to search:

```
on mouseUp
  answer "Choose data to search" ¬
  with "Customers" or "Products"
  if it is "Customers"
  then
    set the dontSearch of ¬
    background "Customers" to false
    set the dontSearch of ¬
    background "Products" to true
  else
    set the dontSearch of ¬
    background "Customers" to true
    set the dontSearch of ¬
    background "Products" to false
  end if
end mouseUp
```

Cut down search times by using a background's 'dontsearch' property.

Now, when you use the **Find** function *HyperCard* ignores the irrelevant background and all the cards in it.

Stack properties

Even stacks can have properties. Here's a selection:

```
cantDelete (T/F)
cantModify (T/F)
cantPeek (T/F)
name (string)
```

You'll note that the first three above can also be set within the Protect Stack dialogue, but it can be handy to set them within scripts, too.

Stacks have properties too. You could, say, restrict stack access to password-holders (see handler below).

Here's an example:

```
on openstack
  ask "What's the password?"
  if it is "opensesame"
  then
    set the cantPeek of this stack ¬
    to false
  else
    set the cantPeek of this stack ¬
    to true
  end if
end openstack
```

If you put this handler in the stack script, it will execute every time you open that stack. If the user doesn't know the password they can still use the stack but they can't peek at any of the scripts – including this one, the one that contains the password!

To find out more...

This has been a necessarily brief excursion into the world of properties. However, it should at least have given you an idea of the programming potential available, and the properties listed above are amongst the most useful.

As with last month's instalment, though, it's not been possible to be exhaustive. Can I once again recommend that you get hold of a copy of a HyperTalk programming book? There is nothing quite as good as the standard HyperTalk reference supplied with the full version of the program.

If you haven't got that, though, then try to get hold of *HyperProgramming* by Colouris & Thimbleby. (Price: £25. ISBN 0-201-56886-1. For more details contact Addison Wesley, tel: 0734 794000.) Or *HyperTalk and Hypertext* by Stanley. (Price: £25. ISBN 0-7506-0500-6. For more details contact Butterworth and Heinemann, tel: 0865 310366.) Both books offer a full guide to *HyperCard*.

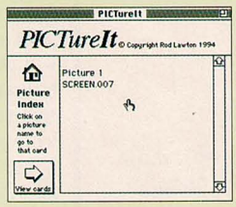
Rod Lawton

ON THE COVER DISK...

This month's cover disk stack is called *PICTureIt*. Have you got lots of PICT files on your Mac? Would you like them indexed alphabetically, and view them at will?

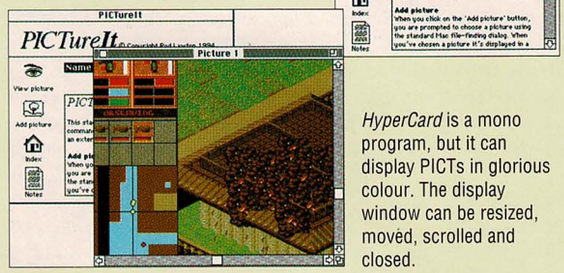
PICTureIt uses HyperTalk's 'picture' command, which displays a file in a separate window (in either colour or mono). This lets you view PICTs and add them to a database (one PICT per card), and also produces an index card listing all the PICTS you've recorded in your stack. There are buttons to view existing PICTs, add new ones and add notes about individual PICTs.

The PICTs are displayed in a standard Mac window which can be resized, repositioned, scrolled and closed. Oh, and there's also a scrolling info field to explain how it works.



The first card in the *PICTureIt* stack has a scrolling index of stored PICTS which is updated each time you go to that card.

A new card is created for each new PICT 'stored'. These cards, also have a pop-up 'notes' field.



HyperCard is a mono program, but it can display PICTs in glorious colour. The display window can be resized, moved, scrolled and closed.

NEXT MONTH

We'll be taking a look at variables, subroutines and functions. All standard programming mechanisms and all included in HyperTalk (see, I told you it was just like any other programming language). Find out how to make your scripts work faster and better – and how you can write them so that they make sense when you come back to them later! It's all in the next issue of MACFORMAT.

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SWITCH

You and the law

A libel suit is messy, costly and often avoidable. Steer clear of trouble by bearing these pointers in mind...

If you've been following this series in MACFORMAT, you may feel ready to start exercising the freedom of the press, uncovering wrong-doing and lambasting your enemies. But beware. If the British press is free, it is so in only a limited technical sense. We say we have a free press because there is no 'prior restraint'. We are allowed to publish first and take the consequences later. Except in certain circumstances (particularly in broadcasting), no official body has the right to see what you are going to publish before you put it out on the streets.

This principle was famously expressed by the Duke of Wellington, who, when offered the chance to buy off someone's scurrilous memoirs, replied, "Publish and be damned." These days there are many ways in which publishers can be damned. Publishing is hedged around with serious legal restrictions, with more on their way. The ones everyone needs to know about now are defamation (or libel) and contempt of court. Between them they have the potential to cause you a great deal of trouble.

Defamation

Defamation means damaging someone's reputation. To publish legally you must not damage someone's reputation without good reason. A libel suit is a civil action taken by someone who is convinced they have been defamed.

Libel law has become immensely complex, and incredibly expensive, but in essence it is quite simple. A libel is a defamatory statement about someone that is published in a permanent form: writing, photographs, drawings, even radio and television. If it is just spoken, then it is slander, where different rules apply.

"YOU CAN, FOR INSTANCE, SAY THAT A PERSON IS UNABLE TO CARRY A TUNE IN A BUCKET"

What is a defamatory statement? The classic definition is: "A statement which tends to bring someone into hatred, ridicule or contempt, or which causes him to be shunned or avoided, or which has a tendency to injure him in his office, profession or trade." Another version goes like this: "words which tend to lower the plaintiff [that is, the person libelled] in the opinion of right-thinking people generally."

Consider these words carefully. Note that no-one actually has to be damaged to prove libel: the plaintiff just has to show that the words complained of would *tend* to lower his reputation. That phrase "right-thinking people generally" is intended to mean ordinary, reasonable people with middle-of-the-road views. For instance, if you said that someone was an agnostic, that might lower that person in the eyes of fundamentalist Christians, but most people wouldn't be concerned.

Be warned, though: the test is whether what you say damages someone in the eyes of readers of *your publication*, even if the general population finds the remark unobjectionable. For instance, if you are writing in a football fanzine and you say someone has two left feet, that is likely to lower them in the readers' estimation, whereas it wouldn't mean much if you wrote it in MACFORMAT. Of course, these are precisely the things you will want to say; and that's why you need a working knowledge of libel, to help you find ways of saying what you want within the bounds of the law.

The "shunned or avoided" part is important. You may not be suggesting wrong-doing, but if people tend to stay away from that person as a result of what you say, you might be in trouble. It's not wicked to have an infectious disease, for instance, but it might make people wary. The phrase about a person's "office, trade or profession" is even more crucial. You can, for instance, say that a person is unable to carry a tune in a bucket. But if that person is Morrissey you are, technically, libelling him, because singing is how he earns his living. (If you said Elvis, you'd be OK: the dead can't sue for libel.)

These damaging remarks about people need not be stated straightforwardly. If you say "Oliver Reed was his usual sober self" when you mean he was rolling drunk, you can expect that subtle nuance to be detected by Reed, your readers and a libel jury.

Ask yourself, "Would I be happy to see that written about myself? Would I want my family and friends to read it? Would it make people less likely to employ me?" Of course, many times you will want to write things about people you wouldn't like to see written about yourself: not all publications are *Hello!*

Defending your story

Libelling someone is all too simple – see the box headed 'Three steps to libel' opposite. Luckily, there are defences against a libel action, which need to be borne in mind when you are actually writing your material or editing other people's. As editor, you are legally responsible for every word in your publication, so you ought to know what you are doing.

Justification Truth is an absolute defence against a libel action, but you have to be able to prove it. You may be convinced that two members of the Cabinet are having an affair, but could you prove it? The court will want to hear your evidence, and while it may overlook trivial mistakes in your story (for instance, the dates or times of meetings) it will expect you to prove what is called the 'sting' of the libel, the bit that does the damage. In my experience very few people will sue you if you get the story absolutely right, although it does happen.

Proving what you have said is called a

CONTEMPT OF COURT

Even more worrying than libel, in a way, is contempt of court, but at least here there is general agreement that the law has a sensible purpose: to ensure people get a fair trial. In short, you are not allowed to write anything during a legal process that is likely to prejudice a jury against a defendant in the trial that eventually takes place.

Most people fall foul of what is called 'strict liability' contempt, defined in the 1981 Contempt of Court Act as what happens when a publication "creates a serious risk that the course of justice in particular proceedings will be substantially impeded or prejudiced." The problem starts from the moment a case becomes 'active' – when a suspect is arrested – and lasts until the verdict. You should not repeat the suspect's previous convictions or make remarks about his lifestyle. Criticising the decision to prosecute and anticipating the verdict are equally dangerous. It's contempt if the jury is likely to be influenced by your article.

Court reporting is specialised work. But your publication may make reference to current legal actions. Make sure you either read up on your obligations or take advice. It is *not* enough just to sprinkle around the word 'alleged', as in "the alleged rapist has clearly got a long history of sex crime"!

'justification' defence, and is exceptionally difficult. Journalism relies on hearsay, but that's banned in court. People can only give evidence about what they have actually seen, not what people have said to them. And people who give you tip-offs for stories may not take kindly to being hauled up in court as witnesses. If you are writing anything that could lead to a serious libel action, you are well advised to try getting sworn statements from your source. At the very least it will make them aware of the consequences of what they are saying.

You must also be careful of making generalisations based on one particular provable incident. You cannot call someone a drunk if you only have evidence of them being drunk once.

Fair comment The second, and most common, defence is called 'fair comment'. The law defends your right to state your honest opinion on a matter of public interest, as long as that comment is based on true facts. Unfortunately, keeping fact and opinion separate is not as easy as it sounds.

For instance, let us return to Morrissey for a moment. It is fair comment to say that he cannot carry a tune in a bucket, if that's what you honestly think. It is not, however, fair comment if you say that is because he is tone deaf. Tone deafness is a genuine condition from which Morrissey, appearances to the contrary, does not suffer. The 'fact' on which you based your comment is false.

Similarly, you can say in your football fanzine that Boothroyd, the United centre-forward, is looking increasingly sluggish. You cannot say, unless you are prepared to prove it, that he looks that way because he spends every evening getting smashed in the Cat & Canary. There is a saying that "the law does not descend to vulgar abuse", which means you can, if you must, call people names: but it's better to use names with no factual component. Thus 'swine' is better than 'bastard', unless you know your target is a single parent offspring.

The fair comment defence is your natural standby if you want to remark on politics, entertainment, sport, the arts or public administration, but there is a problem. The defence only operates if you are stating your honest opinion: it won't defend opinions adopted to be provocative, like those in the Sunday newspapers. And the defence is invalidated by malice.

What is malice? In real life it means simply 'spite' or 'nastiness'. In legal terms it implies dishonesty: saying things that you know to be false or without making any effort to find out whether they are true or not. If you honestly believe something to be true, there is no malice. And in order to have your fair comment defence defeated, the plaintiff would have to prove that you were printing things you knew not to be true, or were acting from some base motive, for instance money.

There is one more defence: privilege. This is a technical matter which protects the rights of free speech on certain state occasions: in court, in Parliament and local council, in public statements and public meetings. As long as statements made in these circumstances are reported fairly and accurately, no libel actions can arise from them. Like fair comment, though, privilege is usually defeated if there is malice. So, only write what you believe to be true.

Now, you may think all this is remote, because you only hear about half a dozen libel actions a year, when they go to court. True, but the others don't because the publishers see they have no defence and have to pay up. Every day people collect money from publishers because of libel, sometimes because of simple mistakes.

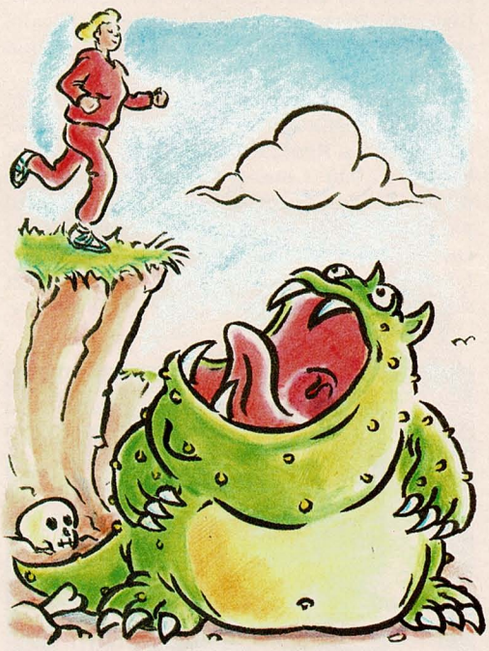
The only good news is that there is no legal aid (yet) for libel actions. If someone wants to sue you, it will cost them a lot of dosh, and you may not have enough money to make the gamble worth their while. If you intend to make it your business to annoy the rich, be extremely careful. Everyone else, however, can make your life difficult with complaints to non-judicial bodies, for instance the Press Complaints Commission. So get your facts right.

If you do get a libel writ, it's tempting to say leave the country immediately. Certainly you must seek immediate legal advice. A solicitor's letter is slightly less threatening, and a robust reply or a printed correction may see off the complainant. You mustn't, however, apologise: that is an admission that you are at fault, which might destroy your defence.

Essential reading

Anyone contemplating publishing anything should read more on this subject: there's much more that can get you into trouble. A good brief guide is *Essential Law For Journalists* by L C J McNae. Much more comprehensive and interesting (and expensive) is *Media Law* by Geoffrey Robertson and Andrew Nicol. You don't have to have memorised these books, nor should you let them intimidate you into silence. The important thing is to get a sense of when you are likely to run into trouble and when you need advice.

John Morrish



"THE IMPORTANT THING IS TO GET A SENSE OF WHEN YOU ARE LIKELY TO RUN INTO TROUBLE AND WHEN YOU NEED ADVICE."

THREE STEPS TO LIBEL

1 There must be a defamatory remark. It doesn't have to be a statement by you: it could be a quote from someone else, or you could be repeating a rumour. You could even profess to be disproving a rumour, as in the case of Major v *The New Statesman.*

2 You have to identify a particular person. The plaintiff must prove that ordinary people would have known it was about him. *It is not necessary to name someone to identify him.* Let me explain. If you write "One of the members of the board of our football club has run up huge debts in his building business" and only one of the board members is a builder, you've identified him. If two members are builders, you've libelled both.

It is possible to libel a group of people. To describe the journalists at a trial as "beer-sodden old hacks" is a libel since the group is small enough to enable individuals to be identified.

You don't even have to write about someone to create a libel. If you are writing a piece about corrupt businessmen and you use an old stock picture of a man behind a desk, you may have libelled him, even if you don't know who he is. The only safe approach to illustrating this kind of story is either to use a picture posed by a model, who can sign a release to say they won't sue, or a cartoon or illustration. I recently saw a wonderful example of just this. A magazine ran a piece about Hell's Angels and illustrated it with a photo agency picture of an unsavoury-looking man in black leather on an old British motor-cycle. Unfortunately, he proved to be a vicar, leader of a group of Christian motor-cyclists. A lengthy apology ensued.

The libel doesn't have to be in the text. It can be in the headline or in captions. If you have a picture story headed "Farmer Jones and his prize-winning pig", and then you put the caption "Jones is on the left" underneath, he would have legitimate grounds for complaint.

So, make sure you have the right target. Then you can work out how to say what you want within the law. But getting a libel writ accidentally from someone you've never heard of because you got a name wrong is a disaster.

3 The defamatory material has to have been *published.* But publication simply means shown to a third party. A letter which is sealed and sent only to the addressee is not published: but if it is opened and read by his secretary, it is. So your newsletter, or fanzine, or shop-window notice is quite capable of libelling someone.

20 of your most common Mac problems solved

MACANSWERS

GOT A PROBLEM WITH YOUR MAC? WE'RE HERE TO SOLVE IT!

It was back-to-basics time in the MACFORMAT advice clinic at March's Computer Shopper show. Over four days, MACFORMAT's experts, Eddie McKendrick and Sean Land, answered more than 400 questions, many of them from new Mac users – or even from PC owners who've seen the light and are now considering Apple – as well as the odd query that had us all stumped. (Our favourite: "Is each Mac still signed inside by the people who designed it?")

More than anything else, Mac users wanted to know about the new PowerMacs, about multimedia and DTP, and about links between their Mac and other computers.

Colour printers were also a surprisingly common area of concern, as was that perennial poser "What Mac should I buy?" (To which our response is: buy the best you can afford, not forgetting the cost of software and peripherals; but don't buy lower than an LC475, or you'll probably be excluded from upgrading to PowerMac.)

Here are the 20 most common questions and answers.

Do-it-yourself problem solving

One of the main causes of a program not working properly is something called an INIT clash – this ominous-sounding term means your program isn't happy with one of the system-level Extensions (INITs in System 6) which you are running.

Fortunately, it's easy to check if this is the case. First of all, restart your Mac without any System Extensions (INITs). If you're running System 7.0 or above, that means restarting the Mac and holding down the [shift] key – a message telling you 'Extensions off' will appear. For any System version below 7.0, move all the Control Panels and INITs out of your System folder and restart the Mac.

If your program now works, it must have been unhappy with one or more of the INITs. The only way to work out which one is the culprit is to move them all out of the System folder, then, after a hearty bout of swearing, put them back in one at a time – not forgetting to restart your Mac after each one – and test the program again after each one has been replaced.

DTP Solutions

SOFTWARE

Q *I'm thinking of getting into DTP to save my small business money on printing bills, but everybody recommends different software and printers. What's the best?*

A For most of us the choice of DTP software comes down to a short list of two: *QuarkXPress* and Aldus *PageMaker*, which will set you back approximately £720 and £550 respectively if you buy through mail order.

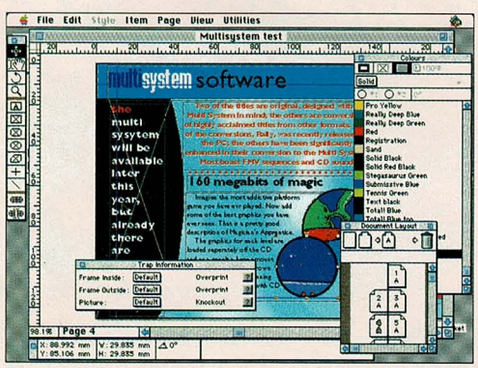
Many DTP users have fierce loyalty to one or the other, but to be honest, over the last couple of years the gap between them has narrowed almost to invisibility and you could certainly produce a publication such as MACFORMAT, as well as all your business documents, with either. (For the record, we use *XPress*.)

The two packages can be customised with software add-ons (called 'XTensions' for *XPress* and 'Additions' for *PageMaker*), which add further features; perhaps *XPress's* only significant edge over *PageMaker* now is the wide range of XTensions, although many of them are intended for professional periodical publishing rather than personal DTP.

There are alternatives. Aldus *Personal Press* is a good budget package at under £100; *Ventura Publisher* and Frame Technology's *FrameMaker* are widely used for creating long, technical publications, but they're complex and difficult to learn; and if you prefer to buy British, take a look at Advent Desktop Publishing's *3B2*. Check the adverts in this issue for where to get these.

All the above software is primarily suited to 'page assembly' – that is, putting together text and images which have been created in other applications, such as word processors and drawing packages. This makes them efficient for creating multiple-page documents such as brochures; but if your printing needs are concerned with individually designed single-page documents such as posters, which don't use much text, consider one of the drawing packages, such as Aldus *Freehand* and *IntelliDraw*, Claris *MacDraw Pro* or Adobe *Illustrator*. Again, check the adverts for sources and shop around for the best prices.

For everyday desktop publishing, any 300dpi or 600dpi PostScript laser printer should serve you well; the Hewlett-Packard Laserjet 4ML at around £1,000 is one of our favourites. Do be prepared when shopping around for printers to pay that bit extra for PostScript rather than QuickDraw – DTP packages are designed for PostScript output and, though you will get some sort of printout from a QuickDraw machine, you'd be wasting many of the features you paid for in the software.


File Edit Style Item Page View Utilities
Multisystem test
multisystem software
the multisystem will be available later this year, but already there are
160 megabits of magic
Trap Information
Page 4

QuarkXPress enables you to view colours, guides, document layout and a whole host of other things, but do you really need all this to lay out your work?

Mainframe connections

SOFTWARE

Q *I use a Mac PowerBook 180, but my firm uses an IBM 3270 mainframe and an Ethernet network. Is there any way I can access the mainframe from my portable?*

A Yes. You'll need a LocalTalk-to-Ethernet adapter physically to connect the PowerBook, and then terminal-emulation software so the mainframe thinks you're a 3270 terminal; try *Extra!* from Communic8 Software (081 878 0066). This is graphic-interface-based emulation software which supports up to 26 simultaneous sessions on the host mainframe, each in a separate window; all the 3270 display features such as colours and character highlighting; and a clipboard to move data between the 3270 sessions and your other PowerBook applications.

Music on the Mac

SOFTWARE

Q *I want to produce typeset-quality musical scores on my Mac. What software do I need?*

A Last month MACFORMAT reported on the demo version of *Lime*, which we reckoned was a comprehensive package for less than a fiver – although the demo version only allows scores up to three pages. Contact Stormont Software on 0232 487923.

The most popular professional package – at more than a hundred times the price of Lime, of course – is *Coda Finale* from MCM (081 963 0663). Note information can either be added manually or taken direct from a MIDI keyboard, and then edited on-screen. Macros called 'metatools' can be written to automate procedures such as transposition.

Entry level DTP

HARDWARE

Q *I haven't got a Mac yet, but I'm considering buying one, mainly for word processing and a bit of DTP. What model should I buy?*

A With retailers routinely offering an 8/160 configuration and 14-inch monitor for not much more than a grand, and Apple committed to an upgrade path to PowerMac, we reckon the LC475 is one of the best buys around at the moment. If you've got a bit more cash to spare, however, seriously consider a Power Mac 6100 at about £1,750 in 8/160 configuration with 14-inch monitor.

Modem Operandi

HARDWARE

Q *What exactly is a modem for?*

A At the most basic level, a modem is for connecting computers via telephone lines rather than on a special computer network. The modem is the proverbial 'little black box' that translates the electrical signals computers understand into those that the phone system uses, and then translates them back again at the receiving end.

But that's boring. Where modems come in useful is in transferring files – applications or documents – from one Mac to another, in different cities or even nations. You can also use them to gain access to bulletin boards and other services, which enables the modem owner to use electronic mail, refer to on-line databases and 'download' shareware, bringing it through the modem on to your Mac. For more details, see the next question, about the Internet, the international communications network of bulletin boards and on-line services.

Increasingly, modems also enable you to send faxes straight from your Mac – you don't need to make a printout but they appear as normal faxes on the receiving end's machine.

Any modem advertised as Mac-compatible should work with any Mac *[Really? – Ed]*, and they start at under £100. You'll also need communications software to control the modem, but this is often included and there are several good shareware packages available. Take a look at the excellent *ZTerm*, for example, or the very user-friendly *Telefinder*.

ZTerm

© 1989-92, David P. Alverson
Alverson Software
5635 Cross Creek Court
Mason, OH 45040-2448

This program is ShareWare. If you use this program often, you must register by sending $30 US for Registration Only or $40 US for Registration with Disk. Commercial distribution restricted. Thank You for your support.

Any re-distribution MUST include the doc. and registration files.

Try shareware programs to keep your modem in-line and on-line. At just $30, *ZTerm* is quite a bargain. If user-friendly is where you're at though, you may want to check out *Telefinder*.

Inside Internet

SOFTWARE

Q *How do I connect to the Internet?*

A If you are an individual user, it is not really feasible to connect directly to the Internet, but there are several commercial providers of on-line services which will give you Internet access. CIX is the best at the moment. It gives you 'Internet dial tone' – the IP prompt from which you can use commands such as **telnet** and **ftp** – and also enables you to read Usenet news groups, though you cannot write to them. See page 82 of this issue for details of how to go about connecting.

CompuServe does not yet have an Internet gateway, except for mail, but is about to introduce one. The closest you can get to direct connection is through Demon (081 349 0063), which for a fixed monthly fee gives you your own Internet address and, unlike CIX, unlimited, untrammelled access to the 'Net.

If you work for (or study at) a government or educational institution, it may well already be connected to the Internet – check with your institution's computer centre. A few commercial organisations are connected, too. For information on connecting your organisation to the Internet (but not for advice on individual use), contact JANET 071 405 8400, Mercury Communications 081 914 6174, Pipex 0223 250120 or Racal Network Services 0256 469334. The last three are commercial service-providers, while JANET – the Joint Academic Network – is the UK Internet Registry of Last Resort, which allocates Internet addresses to new nodes.

Brought to account

SOFTWARE

Q *Can you recommend a software package for accounts? I run a small business and want to automate my records so I can give them to my accountant at the end of the year.*

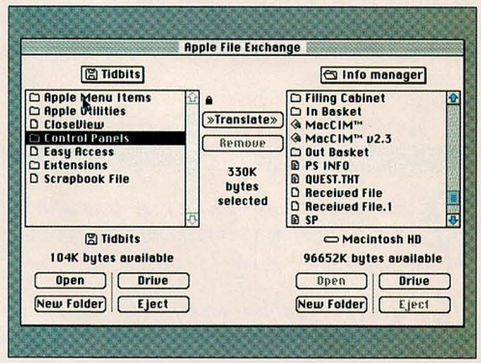
A You are faced with an embarrassment of riches. *Pegasus* and *Sage* are the biggest names in Mac accounting software, but for very basic sales and purchase ledger records you may consider them overkill. Consider *MacMoney*, *MYOB* (Mind Your Own Business) or one of the *Ritz* range; a good compromise between the low-end and the high-powered is *Ritz Median*, which should cost you around £200 by mail order.

Before you buy, talk to your accountants. If they use a computer, it's more likely to be an IBM-compatible PC than a Mac, and many accountants instinctively prefer working with paper records anyway – so even if you decide to keep your accounts on the Mac, you may end up handing over a hard copy at the end of the year. You must also check with your local VAT office before you start keeping VAT records on the Mac; Customs and Excise requires software to meet its criteria.

PC Emulation

GENERAL

Q *I've got a Mac at home but we use IBM-compatible PCs at work. Can I run the same software and transfer files between them?*



If you're only planning to transfer word-processing files and the like, the old faithful – Apple File Exchange – should be able to do the biz for you.

A Sort of, and yes. Because Macs and IBM-compatible PCs use entirely different processor chips – the Motorola family on the Mac and Intel family on the PC – and have totally different operating systems, software has to be written especially for each. A PC .EXE file is just gibberish to a Mac (but then, it is to everyone). However, you can get round this by running 'emulation' software, with translates instructions for MS-DOS or Windows and Intel chips into a language that the Mac System and Motorola chips can understand. In effect, the Mac pretends to be a PC.

The emulation software you need is *Soft PC with Windows*, from Insignia Solutions, which does a pretty good job with both DOS and Windows. (We don't know of any OS/2 emulator.) This will cost you about £310 from dealers, though if a particular PC package is vital to you, you should first check that it works with the emulator. It's also bundled with some configurations of the PowerMac, though on the cheaper models this actually costs more than buying it separately. You can contact Insignia Solutions on 0494 459426.

Bear in mind, though, that *Soft PC* itself uses a lot of your Mac's memory and processing power, leaving little available for the actual DOS or Windows applications you want to run. On an 8/160 PowerMac 6100 we could only just manage to run Windows itself, and you would need a top-of-the-range PowerMac 8100 to get decent 486 performance levels.

Fortunately, if all you want to do is transfer data (such as word-processor files or spreadsheet worksheets) between your PC and your Mac, help is at hand – indeed, it probably came

with your Mac. On the **TidBits** disk of the System 7.0.1 and System 7.1 disks, and also in the System 6 disk sets, you'll find an application called *Apple File Exchange*. (If you have a Performa, you'll find a similar application called *PC Exchange*.) This can copy files off PC-formatted disks on to your Mac hard disk, and vice-versa. The process is straightforward and reliable; all you have to worry about then is the compatibility of file formats.

If you use the same application on the Mac and PC (eg *WordPerfect* or Microsoft *Excel*) the two versions should understand each other's files fine. If not, you may have to transfer word-processor files in ASCII format, and database and spreadsheet files as tab- or comma-delimited ASCII. Check your manuals. Finally, be cautious with *WordStar* files, which unless in ASCII form are unintelligible to most Mac applications.

Recommended reading

GENERAL

Q *I've read all the manuals that come with my Mac, but they don't explain all the jargon. Are there any good books on sale?*

A Plenty! Try *Jargon: An Informal Dictionary of Computer Terms*, one of several witty and browsable books published by Peachpit Press of Berkeley, California (ISBN 0-938151-84-3, UK distributor Longman Higher Education, 0279 426721). It's by Robin Williams (no, not that one), whose book *The Mac Is Not a Typewriter* – also Peachpit Press – is the best guide around to effective word processing. Larger bookshops, particularly branches of Waterstone's, should have these and a good selection of other Mac titles. And, of course, look for the 'Jargon Busting' boxes scattered throughout every issue of MACFORMAT.

Colour printing

HARDWARE

Q *I've been considering a colour printer for my Mac. What kind should I buy?*

A Unless you really need to produce photographic-quality visuals, and money is no object, you're looking for an inkjet printer. (The expensive, photo-quality alternative is dye-sublimation. This has become much cheaper with the release of the Fargo Primera, reviewed this issue on page 42, but it will still set you back a cool £1,000.)

Look at the Apple A3 inkjet (about £600 by mail order) or the A4 Canon BJC-600 (about £850); both print at 360 dots per inch on to plain paper or OHP transparencies. The Hewlett-Packard DeskWriter C is also a good buy at a little over £300.

These are all QuickDraw printers, which means you won't get quite the same detail on type and line art that you would with a PostScript printer, although they're fine for posters or point-of-sale material. PostScript upgrades are available.

Remember, though, that the price of colour printing in high street quick-print shops has dropped dramatically in recent times, and for long runs (say 200 posters) you're almost certainly better off using conventional printing methods. You then get the benefit of PostScript, too, because a professional bureau can output PostScript separations from your desktop publishing package.

So, if you only want to do a few copies of many different documents, buy an inkjet printer. If you want many copies of one, seriously consider 'conventional' print.

PC Printers

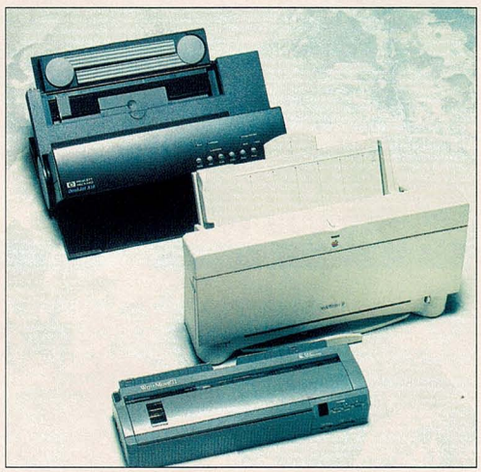
HARDWARE

Q *Recently I dumped my IBM-compatible PC and bought a new Mac. Can I use my old PC printer with it?*

A Almost certainly you can, but it will involve an extra investment. Virtually all PC printers require a parallel (or 'Centronics') port – the socket on the back of the computer where the printer is connected. The Mac, however, doesn't come with a parallel port, because Mac printers use the faster LocalTalk or SCSI connections.

What you need is a cable with a parallel plug at one end and LocalTalk at the other. As MACFORMAT reported in April, such a lead is now available: the PowerPrint cable, which comes with software to ensure compatibility between the Mac and your PC printer, costs £158.63 from Academy Software (081 656 9560). It's worth shopping around though, as some mail-order dealers may be able to save you a few pounds on that price.

It's also worth double-checking before you buy that the software provided will drive your printer, and bear in mind, you could get a new inkjet printer for little more than the cost of the PowerPrint cable.

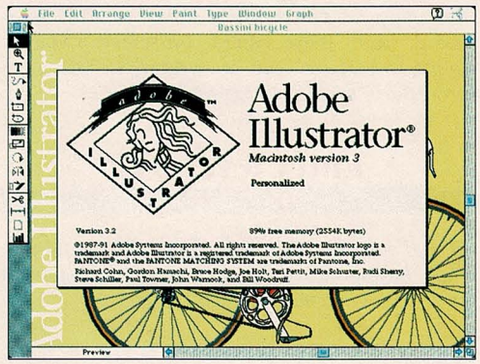


Although it is possible to use a PC printer with a Mac, it's often cheaper to go for a new inkjet.

Software copying

SOFTWARE

Q *I work in a small design studio and am about to buy a Macintosh for myself at home. At the studio we use Adobe* Illustrator 3. *Will it be possible for me to copy this program from my office machine to my home machine and, if so, how many high density disks will I need?*



Copying commercial software is highly illegal and could earn you hefty fines and even a prison sentence. So be safe – always wear a condom. (No, hang on, that's not right.)

A Without leaping on to the moral high-ground, we do have to point out that making yourself a copy of any commercial software in the way you are suggesting is a breach of copyright. It is illegal.

The best thing to do is budget for a copy of Adobe *Illustrator* in your package, or maybe even persuade your employer to buy you a legal copy. You may be interested to know that there is a new version of *Illustrator* available (5.0) which may be a better investment.

PowerPC and PowerMac

GENERAL

Q *What's the difference between PowerPCs and PowerMacs? Also, is it true that I can run Windows on a PowerMac?*

A Power Macintoshes are the new Apple computers that use the Motorola PowerPC 601 chip as their central processor – so PowerPC is a kind of chip, like the Motorola 680x0 family used in earlier Macs, while Power Macintosh is a product range.

It is possible to run 100% legal PC programs – including Microsoft Windows – on any Power Macintosh via an emulator called *SoftPC*. Performance tends to vary depending on which Power Macintosh *SoftPC* is running on, but all PC applications will run. However, at least 12Mb of memory is recommended for running *SoftPC* on a Power Macintosh.

PowerPC compatible

BUYING ADVICE

Q *I've already invested in my current Mac setup. Will my existing software and peripherals work when I upgrade to a Power Macintosh?*

A Apple's official line is that "thousands of current Macintosh applications" run without problems on the Power Macintosh range. We've been using a Power Macintosh 6100/60 here at MACFORMAT and we haven't experienced any compatibility problems. Any programs that have been written with Apple's

programming guidelines in mind should be problem free.

Hardware compatibility is a little more hit-and-miss. Apple tells us that any peripherals that work with the current line of AV Macintoshes stand a very good chance of working with the PowerMac.

The best advice is to ask your dealer for confirmation of compatibility with your current range of peripherals before you part with any of your hard-earned cash.

Entry-level Multimedia

GENERAL

Q I'm very interested in multimedia. Can you tell me how much it'll cost to get started and what sort of material is available on CD-ROM?

A Multimedia is an exciting field at the moment – watch for a special feature in next month's MACFORMAT which will answer all your questions. To get started, the most essential extra piece of hardware you will need is a CD-ROM drive. Depending on which Macintosh you have this can be fitted internally or externally.

The most popular – and reliable – CD-ROM drive at the moment is the Apple CD300. As Apple is about to release the CD300+ drive it is possible to pick a basic CD300 at bargain basement prices – check the adverts in this issue and you'll find that £180 should give you plenty of scope.

As for what's available on CD-ROM: you name it! The great strength of the medium is its massive storage capacity – one CD-ROM disc can hold as much as 400 floppy disks – so you can find anything from huge games, with speech, sound effects and digitised actors playing the parts, to complete reference works offering you whole encyclopedias on tap. MACFORMAT's CD-ROM reviews every issue will help keep you up to date with what's available, and for even more you should look out for our new sister magazine *CD-ROM Today*.

Like a sample? Both magazines in fact come with a CD-ROM cover disc, packed with megabytes of software. In MACFORMAT's case, this is included with a limited number of copies each issue – to make sure of your copy, check with larger high street newsagents, or subscribe (see page 98) and request the CD-ROM edition every month. See page 10 for details of this issue's CD-ROM goodies.

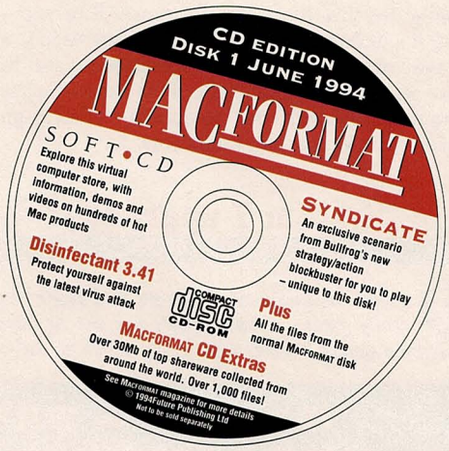
Macintosh pricing

BUYING ADVICE

Q The LC 475 is a very tempting computer for me to upgrade to from my current Classic. Should I wait for it to fall further in price?

A It really is unlikely that Macintosh prices are going to fall much below the level they are at now, especially considering how much they've been slashed over the last year or so. What is more probable is that, as time goes on, the price will remain the same, but more power will be built into the machine.

Consider, for example, the recent introduction of the Power Macintosh range. The Power Macs offer more computing power than ever before from Apple, yet the entry-level machine costs around the same as the Macintosh LC did when it was first launched.


CD EDITION
DISK 1 JUNE 1994
MACFORMAT
SOFT•CD
Explore this virtual computer store, with information, demos and videos on hundreds of hot Mac products
SYNDICATE
An exclusive scenario from Bullfrog's new strategy/action blockbuster for you to play – unique to this disk!
Disinfectant 3.41
Protect yourself against the latest virus attack
Plus
All the files from the normal MACFORMAT disk
MACFORMAT CD Extras
Over 30Mb of top shareware collected from around the world. Over 1,000 files!
See MACFORMAT magazine for more details
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Not to be sold separately

Want to get into multimedia? Well, all you need is a basic CD-ROM drive, a packed MACFORMAT covermounted CD and plenty of time to explore your new virtual world.

The LC 475 is an excellent value-for-money package and you're going to be hard pushed to knock its price down any further. If you have a real use for the power, buy one now!

PowerPC Upgrade

HARDWARE

Q Can I upgrade my machine to a PowerPC-based Macintosh, and if I can how much will the operation cost?

A It really depends what sort of Macintosh you currently have. You will be able to upgrade anything from an LC475/Performa 600 upwards by either adding a PowerPC PDS (Processor Direct Slot) card or entirely replacing the logic board. The latter is a skilled job though, and must be carried out by an approved Apple dealer or service centre.

The price varies depending on how you choose to upgrade. The PDS card is, in effect, a PowerPC-based accelerator suitable for Quadra and Centris machines. Slotting it in will instantly double the speed of your machine. It is likely to cost just under £600.

A more thorough upgrade would involve replacing the entire logic board of your Macintosh. This is only possible if you have a Macintosh physically similar to one of the current Power Macintosh range. For example, the Quadra 610 is the same chassis as the Power Macintosh 6100/60 and can therefore be upgraded to the same specification.

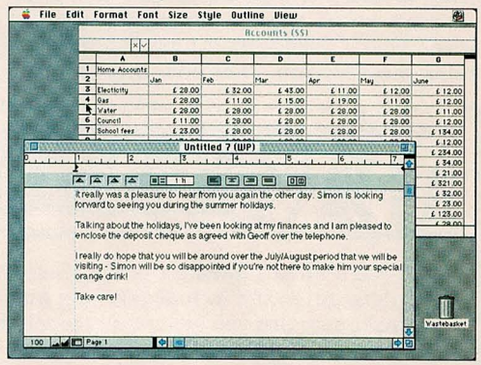
Prices range from just under £700 to upgrade to a PowerMac 6100/60 right through to just under £1,800 to transform a suitable Quadra into a PowerMac 8100/80 AV.

A PDS option for the LC475/Performa 600 will be available soon. For details of upgrades from Apple and third-party sources, see MACFORMAT's special report on the PowerMac range in issue 11. (If you missed that, see page 94.)

Upgrading to a PowerMac can be a complicated and expensive business. The prices vary depending on the type of machine you currently own.

Macintosh Packages

BUYING ADVICE


File Edit Format Font Size Style Outline View
Accounts (SS)
Untitled 7 (WP)
It really was a pleasure to hear from you again the other day. Simon is looking forward to seeing you during the summer holidays.
Talking about the holidays, I've been looking at my finances and I am pleased to enclose the deposit cheque as agreed with Geoff over the telephone.
I really do hope that you will be around over the July/August period that we will be visiting - Simon will be so disappointed if you're not there to make him your special orange drink!
Take care!
Wastebasket

Most retailers are happy to put together special package deals to cover common areas of home computing, such as word-processing and spreadsheet work.

Q I want a Macintosh to organise my life and my household accounts. Which machine and software would you recommend?

A For all the standard chores of accounting, keeping records and writing the occasional letter, the best machine to go for is the Macintosh LC475 or equivalent Performa. Many dealers are happy to put together special packages which include software like *ClarisWorks* or Microsoft *Works*. Both are excellent integrated packages which cater for pretty much every basic home computing need – and then some. Don't forget to budget for a printer if you're planning to send letters to people, though!

Most basic Mac

BUYING ADVICE

Q What is the cheapest Macintosh I can buy? I am especially interested in the small unit with colour display built-in – how much does this cost?

A Ah, you are referring to the Macintosh Colour Classic which is, alas, no longer produced. It was a machine launched 18 months ago specifically aimed at educational

institutions – and it has been long since superseded. It isn't possible to buy Classic systems any more through mainstream dealers, but the occasional machine is still advertised by mail order companies from time-to-time.

The cheapest system available now is the LC III, which can be configured as a complete system including screen and keyboard for as little as £650.

Invalidated warranty

HARDWARE

Q To add more memory to my computer I need to take the lid off. My dealer tells me this will invalidate the warranty. What are the effects of this?

A What it means is you won't be able to get Apple to repair your machine free-of-charge if it goes wrong. This isn't really a problem if your Mac is more than a year old, because the warranty will have expired anyway. Fitting memory is very straightforward and 99 times out of 100 will be entirely trouble-free – see next issue for a step-by-step guide to doing it yourself. If you are at all uncertain about what to do, simply ask the person who is selling you the memory chips to install them for you. They may make a small charge for this, but it may be worth it to you – and it's definitely worth doing if your Mac is a Classic or similar, with the monitor integral in the casing: you really need to know what you're about with the potentially lethal high voltages lurking around monitors.

System 7 upgrade

SYSTEM SOFTWARE

Q I have a Macintosh Performa and think it's really great – except I don't like the At Ease operating system it comes with. Is it possible for me to buy and run the latest version of Apple's System 7 on it instead?

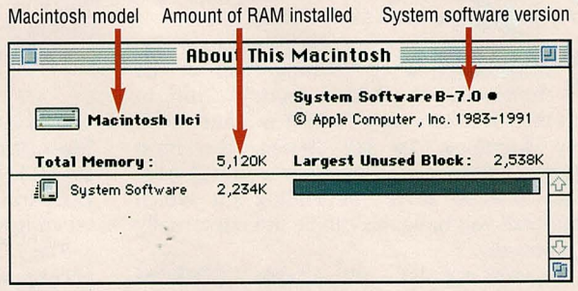
A In a word, yes. The Performa systems are identical in hardware specification to the LC range. It is possible to buy the latest version of System 7 (7.1) from any authorised Apple retailer. The pack includes a complete installation set of disks and a manual.

Be aware, however, that it is not possible to use the System 7.1 update release to upgrade the operating system of a Performa – you need to get hold of the complete set of system software.

Eddie McKendrick & Sean Land

HOW MUCH RAM HAVE YOU GOT?

Even the same models of Mac can have different amounts of memory or run different System software. To solve your problem, we need to know all about your setup, and this is where you can find out. Make sure you are in the Finder, point to the **Apple** menu and go to the first item **About This Macintosh,** then release the mouse button.



MACANSWERS

If you send in a question for the MACFORMAT experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to: **Mac Answers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW, or fax it to us on 0225 446019.**

Name .....

Address .....

.....

.....

Your Mac
(For example, Performa 200, IIfx, PowerBook 145):

.....

Approximate age of machine: .....

System version
(see About this Macintosh screenshot above):

.....

Amount of RAM
(Total Memory figure from the About This Macintosh dialogue box):

.....

Are you using virtual memory? .....**YES/NO**
(This is accessed from the Memory control panel under System 7)

Do you have 32-bit addressing turned on? .....**YES/NO**
(This is accessed from the Memory control panel under System 7)

If your Mac has an external monitor, list the make and model; if you are using a video card, give details:

.....

.....

Details of any SCSI devices connected
(eg CD-ROM drive, hard drive, scanner):

.....

.....

Details of any other relevant hardware which could help us to answer your question:

.....

.....

.....

Now, use this space to describe your problem or question. Include as much relevant information as possible. Please continue on a separate sheet if necessary.

.....

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16Mb LCIII/Centris/ Quadra 650 Simm	£454
16Mb Quadra 840AV / Power PC Simm	£479
32Mb Quadra 800/840AV Simm	£925
Power Book / Duo	
4Mb Power Book 140/145b/170	£118
4Mb Power book 160/165/180	£120
4Mb PB 165c/180c	£123
4Mb Duo 210/230/250/270c	£127
6Mb Power Book 140/145b/170	£170
8Mb Power Book 160/165/180	£226
8Mb Power Book 165c/180c	£238

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ETHERNET NETWORKING

8Mb Duo 210/230/250/270c	£228
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10Mb PB 165c/180c	£292
Video RAM	
256K Video RAM Quadras, Centris, Colour Classic	£13
512K Video RAM LC, LC475, Duo dock	£25
FPU Maths Co-processors	
LC, LCII, Performa 400	£42
LCIII,IIvi, Colour Classic	£42
IIsi	£61

Sonic Systems Inc

EtherNet & Networking	
Ethernet Card – 10 Base T	£88
Ethernet Card – Thin Net	£88
Tranceiver – 10 Base T	£49
Tranceiver – Thin Net	£49
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Power Macintosh Hardware

	HD	RAM	Type	VRAM	Mhz	£
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Power Mac 6100/60 8/250 CD	250	8	72 pin	1Mb	60	1412
Power Mac 7100/66 8/250	250	8	72 pin	1Mb	66	1867
Power Mac 7100/66 8/250CD	250	8	72 pin	1Mb	66	1949
Power Mac 7100/66 8/250 AV CD	250	8	72 pin	2Mb	66	2579
Power Mac 8100/80 16/500/80 CD	500	16	72 pin	2Mb	80	3429
Power Mac 8100/80 16/1000/80 CD	1000	16	72 pin	2Mb	80	3895
Power Mac 8100/80 16/500/80 AV CD	500	16	72 pin	2Mb	80	3569

	HD	RAM	Mhz	£
Power Mac 6100/60 16/160 & Soft Windows	160	16	60	1445
Power Mac 6100/60 16/250 CD & Soft Windows	250	16	60	1765
Power Mac 7100/66 16/250 & Soft Windows	250	16	66	2215
Power Mac 7100/66 16/250CD & Soft Windows	250	16	66	2326
Power Mac 7100/66 16/500 AV CD & Soft Windows	250	16	66	2925
Power Mac 8100/80 16/500/80 CD & Soft Windows	500	16	80	3588
Power Mac 8100/80 16/1000/80 CD & Soft Windows	1000	16	80	4029
Power Mac 8100/80 16/500/80 AV CD & Soft Windows	500	16	80	3727
Power Mac PDS Upgrade Card				545

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Apple Macintosh LC Bundles

HD	RAM	Bundle includes	£
LCIII 4/80 Bundle	80	4	with Colour Plus 14" monitor & keyboard	685
LC 475 4/80 Bundle	80	4	with Colour Plus 14" monitor & keyboard	764
LC 475 8/160 Bundle	160	8	with Colour Plus 14" monitor & keyboard	869
LC 475 4/80 Bundle	80	4	with Colour Plus 14" monitor, StyleWriter II, fonts & keyboard	963
LC 475 4/160 Bundle	160	4	with Colour Plus 14" monitor, StyleWriter II, fonts & keyboard	1070
LC 475 4/80 Bundle	80	4	with Colour Plus 14" monitor, Personal LW300, fonts & keyboard	1177
LC 475 4/160 Bundle	80	4	with Colour Plus 14" monitor, Personal LW300, fonts & keyboard	1305

Apple bundles now come with Colour Plus instead of Performa Plus monitors
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LaserWriter Select 360 7Mb	1190
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DIGITAL

DECLaser 1152 A4 PS	559

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LaserJet 4M A4 600dpi PS	1274
LaserJet 4Si Mx 600dpi PS duplex	3230

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MicroLaser Pro 600 A4 600dpi PS	909

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Brilliance 2120 21"	1440
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PrecisionColour 20"	1595
Colour Display 21"	1874
Intellicolour 20"	1899

SONY

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All Customer Services		0772 623281

Apple Macintosh Hardware

	HD	RAM	Type	VRAM	CPU	CoPro	£
LC 475 4/80	80	4	72 pin	512k	25MHz LC040	no	619
LC 475 8/160	160	8	72 pin	512k	25MHz LC040	no	738
Quadra 610 4/160	160	4	72 pin	512k	25MHz 040	no	867
Quadra 610 4/160 CD	160	4	72 pin	512k	25MHz 040	yes	1047
Quadra 610 8/230CD	230	8	72 pin	512k	25MHz 040	yes	1290
Quadra 650 4/160	160	4	72 pin	512k	33MHz 040	yes	1158
Quadra 650 4/160 CD	160	4	72 pin	512k	33MHz 040	yes	1264
Quadra 650 8/230 CD	230	8	72 pin	512k	33MHz 040	yes	1507
Quadra 660AV 8/230 CD	230	8	72 pin	512k	33MHz 040	yes	1199
Quadra 660AV 8/500 CD	500	8	72 pin	512k	33MHz 040	yes	1280
Quadra 840AV 8/500 CD	500	8	72 pin	1Mb	40MHz 040	yes	2680
Quadra 840AV 16/1Gb CD	1000	16	72 pin	1Mb	40MHz 040	yes	3215
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Powerbook 180 4/120 modem	120	4	Cards		33MHz 030		1689
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Powerbook duo 230 4/120	120	4	Cards		33MHz 030		832
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7245S (245)	205		

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WHERE'S IT FROM?

People often ask us, just where do you find all this great new shareware? The place to go for the most up-to-date stuff is (of course) the Internet, the international comms network. I keep an eye on the Usenet news group comp.sys.mac.digest, where every week or so a list of new shareware is posted by the administrators of the Macintosh anonymous ftp site mac.archive.umich.edu. It's there that I find all the software that you see here.

If none of the above made sense to you, then stick to the other sources of shareware listed in the 'where to get it' box on page 80. (Or, of course, read our Comms pages until you start understanding terms like 'anonymous ftp'.) But if you've access to the Internet, or can use anonymous ftp in any form, then check out the umich archive (or its UK mirror, which is at src.doc.ic.ac.uk). It's the best source of up-to-the-minute shareware I've found.

PD AND SHAREWARE – WHAT EXACTLY ARE THEY?

PD is short for 'public domain'; it's software that may be freely shared around among users – there is no fee to pay. It can be obtained from PD houses (companies which specialise in collecting together and distributing this sort of software, usually for a fee), user groups and bulletin boards.

Actually, most free software isn't PD – it's what's known as 'freeware'. This is because putting a piece of software into the public domain deprives the author of any rights to, or control over, that software. So someone else can modify it, claim ownership of it and even sell it as a commercial package. Most programmers are not at all happy at that sort of thing, so the concept of 'freeware' was created. This is software which you can use for no charge, but which the author still retains rights over. For example, many freeware authors specify that their programs must not be altered, and may only be distributed if they are accompanied by the documentation files. For simplicity, though, most people still refer to this type of software as 'PD'.

Shareware is a form of 'try before you buy' software selling. You can obtain the programs from the same sources as PD and freeware, but if you like the software, you send the author a contribution – normally somewhere between $5 and $40 (most shareware authors live in the States). In return for this 'registration fee', you often get upgrades or documentation, so it's well worth paying up.

Shareware *and* PD

Hold on to your modems, boys – we're going in! Andy Hutchinson hooks into the Internet and surveys this month's selection of low-cost and no-cost software...

MacMan Classic Pro

ARCADE GAME

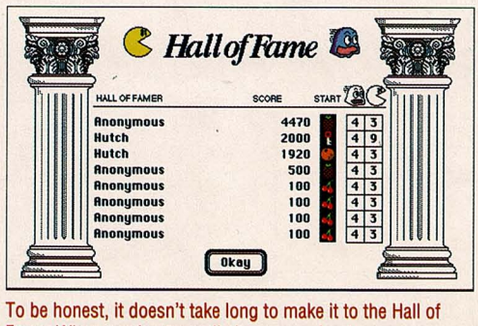
Shareware $10

What goes around, comes around. Swings and roundabouts. There are only five different jokes. Death and taxes. You wait an hour for a bus and then five come along at once. Oh, and no matter which console or computer you've got, you can bet that there's a version of *Pac-Man* available for it.

This version of the senile arcade game remains faithful to the original. Your mouthy yellow blob zips around a maze eating other blobs and avoiding the ghosts which emerge from a prison in the middle of the screen. If the ghosts give you too much of a hard time, then you can eat a power pill and eat them instead. (I can't believe I just explained how to play *Pac-Man*.)

So, what's different? Well, the good news is that it's chock full of options. For starters, there are 32 different speeds. This means that you can get to grips with the game before attempting the full speed version. You can also give yourself as many as nine lives, or even make yourself invincible. Basically, the only thing that's missing from this game is the 'Short Essay on the Life And Times Of Ernst Heinrich Haeckel' option. An oversight which will no doubt be remedied in the *MacMan Classic Pro German Philosophers Edition*.

All cynicism aside, this does play very well. PacMan and his merry ghosts whiz around the maze just like the 'real thing', and the controls are fine. This game's bound to appeal to all sad retro buffs – you know, the ones who spend their entire lunch break hunched over a game of *Tetris*. Be warned, though: level 12's a killer.



To be honest, it doesn't take long to make it to the Hall of Fame. Whenever I get a really low score, I put someone else's name in there.

Family Events v1.4

GENEALOGICAL PROGRAM

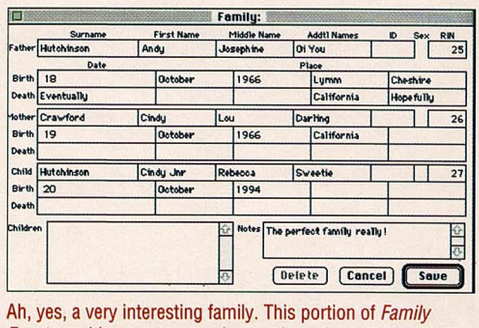
Shareware $35

Do you suspect you've got some royal blood running through your veins? Or perhaps you think you've got some Irish in you? The way to find out for sure is to trace your family tree back through the generations. If, however, the prospect of all that paperwork has put you off, then this program could be exactly what you're looking for, because it automates the cataloguing of data.

You'll still have to do all the leg work of course, examining dusty parish records and spending days hunched over the registry of births and deaths, but once you've found out some information you can enter it into this program. The program creates a card for every person you record; then, as you update the card with further information concerning births, marriages or deaths, it automatically updates your family tree chart.

One of *Family Events'* cleverest features though, is the way it cross-references any information you enter to check for discrepancies. For instance, if you enter a death certificate, the program will automatically check that it correlates with the appropriate birth certificate. If the information doesn't match up, it then offers you the option of correcting the mistake. Once you've entered all the data, you can sit back and check out your family tree.

This is a very slick program which is easy to use and very well documented. The data entry screens, which take the form of tabulated cards, are well designed and convey the maximum amount of information in a clear form. Strongly recommended.

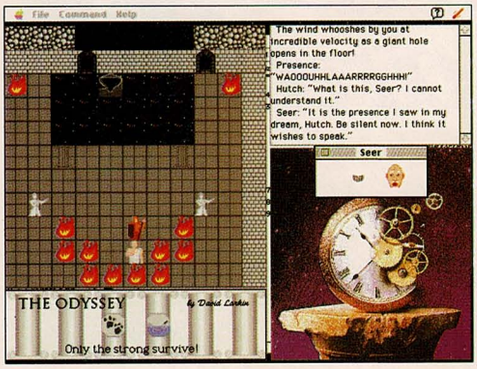


Ah, yes, a very interesting family. This portion of *Family Events* enables you to record a marriage. As you can see, I'm a seriously deluded individual.

The Odyssey

ROLE PLAYING GAME

Shareware $25

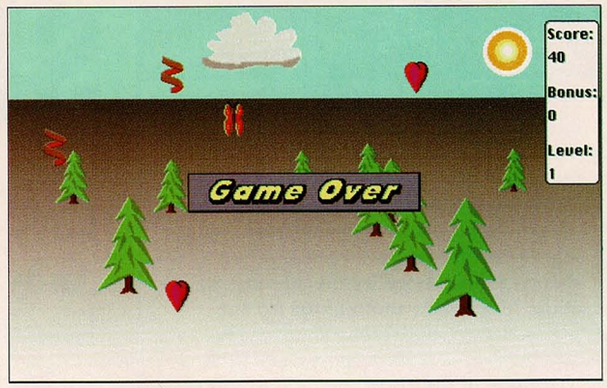

The wind whooshes by you at incredible velocity as a giant hole opens in the floor!
Presence: "WAOOOUHHLAAARRRGGHHH!"
Hutch: "What is this, Seer? I cannot understand it."
Seer: "It is the presence I saw in my dream, Hutch. Be silent now. I think it wishes to speak."
Seer
THE ODYSSEY
by David Larkin
Only the strong survive!

What was that about Greeks and gifts? You'd better remember that particular cliché when you play *The Odyssey* – it's chock full of nasty types.

Ever fancied pretending you're Odysseus, off on a fantastic voyage to do battle with all manner of classical weirdies? Well, fancy no more, because *The Odyssey's* a role playing adventure all about the mythical, plate-smashing chap himself. The object of the game is to save the city-state of Athenia from destruction at the hands of the Chaos Master. (Well, it makes a change from hordes of British holiday-makers.)

The game can be played with either mouse or keyboard – through a series of windows. To talk to someone, you just click on them and then on the speech window; to traverse the Greek landscape, you simply move the cursor over the main view screen and then push it in the direction you want to travel. Everything of importance is accessed from a series of buttons – so to fight, you click on the fight icon and then on the target.

Graphically, *The Odyssey* looks great, although the blocky sprites in the main view screen seem a bit dull. The in-game problems involve getting information from the computer-controlled characters, finding keys, doing battle with large rats and figuring out how to escape the Athenian one-way system. This is one for the more cerebral among you.



Oh wow, man! Like isn't it beautiful. We're on a quest to find the hearts and avoid the spirally things. Like ethereal and incandescent, man

HeartQuest

ARCADE GAME

Freeware – if you like it just smile

There's been much talk about the violent nature of video games, lately. All those war games and beat-'em-ups are meant to desensitise you

COMPRESS AND ENCRYPT

ZipIt

FILE COMPRESSION UTILITY

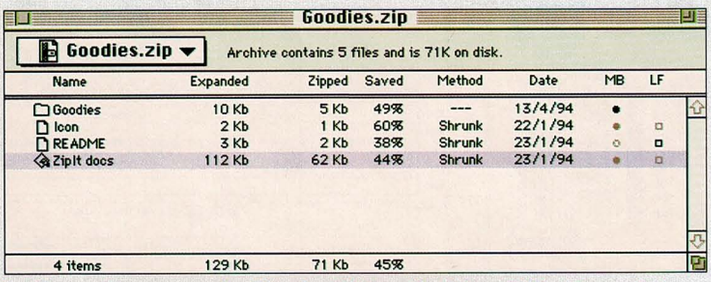
Shareware $10

You'd be forgiven for thinking that file compression tools have always been commercial products. In fact, nearly all of the famous Mac squishers started out as shareware – *Compact Pro* and *StuffIt* being two of the better known programs. *ZipIt* is the latest utility designed to compress files down in size. It claims to squash more than other utilities and at minimal cost.

To test this claim, we tried compacting the same folder with *ZipIt, Compact Pro* and *StuffIt Deluxe*. The folder, which contained both text and program files, was 989K non-compressed.

Program	Time	Saving	Archive Size
Compact Pro	1:05	61%	381K
StuffIt Deluxe	0:58	62%	374K
ZipIt	1:25	64%	353K

As you can see, *ZipIt* certainly does compress files down further than the other utilities, but it took longer to do it. Personally speaking, I'm not that bothered about how long things take to compress or decompress; what's important is how much hard drive space or on-line time I'm saving, and in that respect, *ZipIt* wins hands down. In fact, the only problem I can see with this program is that it doesn't allow you to create self-extracting archives.

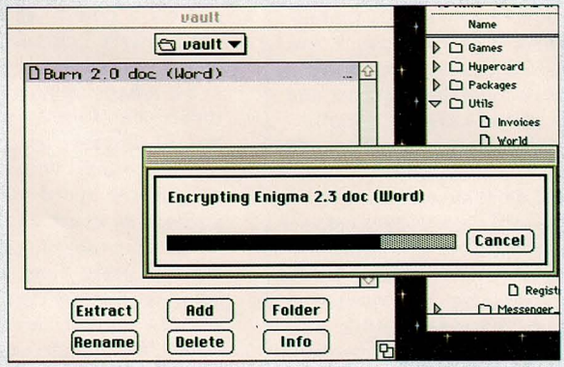

Goodies.zip
Goodies.zip
Archive contains 5 files and is 71K on disk.
Name Expanded Zipped Saved Method Date MB LF
Goodies 10 Kb 5 Kb 49% --- 13/4/94
Icon 2 Kb 1 Kb 60% Shrunk 22/1/94
README 3 Kb 2 Kb 38% Shrunk 23/1/94
ZipIt docs 112 Kb 62 Kb 44% Shrunk 23/1/94
4 items 129 Kb 71 Kb 45%

And here are the compressed archives in all their squished glory. *ZipIt* had the greatest compressing ability, but it was much slower than *Compact Pro* or *StuffIt Deluxe*.

Enigma

FILE ENCRYPTION UTILITY

Public Domain



Worried in case a colleague, parent or partner reads something on your Mac? Encrypt it with *Enigma* and your secret will be safe forever. Just don't forget your password.

One of the biggest coups of the second world war came when the British cracked the German Enigma machine. This encryption device enabled the Germans to send coded messages to their operatives all over the world. What they didn't count on, however, was a bunch of very clever scientists (JRR Tolkien amongst them) and the very first electronic computer.

This program is named after that German coding device, and it does pretty much the same job. You open a folder, called a vault, and add whatever files you want to it. You then assign the data with a key (any sequence of letters or numbers) and the data is encrypted. You can't then decode the data unless you know what the key is. So, if you're an excessively secretive person, you can disguise your memoirs, your bank statements, your novel, your school reports – in fact, anything you're feeling particularly bashful about.

The front-end of the program is very similar to file compacting utilities. You create a folder, then add files which *Enigma* encrypts once you save. If you're really, really, really security conscious then there are plenty of other options which enable you to disguise the key as you type it in, and even destroy the original document.

Now all you need is a Walther PPK, a vodka martini – shaken not stirred – and a bevy of lovely ladies...

to violence. As always though, the critics who jumped on that particular bandwagon haven't actually come up with any suggestions as to what we're meant to play instead. *Virtua Pillow Fighting* perhaps?

Anyway, here's a completely non-violent, somewhat sickly game. You control a butterfly and the idea is to flit around the screen collecting love hearts while avoiding odd spiral things. If you think it sounds daft, you ought to try playing it – you look a right doofus, I can tell you. *[No change there, then – Ed]*

As odd as the game is though, it's jolly playable. The concept's so utterly simple that a two year old could pick it up in minutes. Before long, you find yourself desperately trying to get to the quicker levels, in the hope that you can beat the high score. It may not appeal greatly to Mac users with high testosterone levels, but reconstructed '90s men and women will enjoy it.

Soundbuilder

SOUND RESOURCE EDITOR

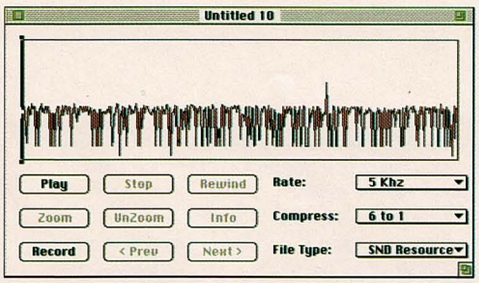
Public Domain

The problem with the Mac's sound control panel is that it's a bit on the primitive side. Fair enough, you can record sounds and save them into your System file, but it's impossible to edit those sounds. That's where *Soundbuilder* comes in. This nifty bit of kit enables you to both record, import and edit sound files in SND, AIFF, AIFC, WAV and VOC formats. It can even read unknown formats.

The program supports stereo sounds and can compress the data you record on either a 3-to-1 or a 6-to-1 basis. The recording time of your samples is restricted only by the amount of RAM you have installed; so if you've got a 16Mb machine, you could probably get a whole song into your memory.

Once the data's in there, it's shown as a waveform. This enables you to cut and paste the sound exactly as you would with a word processor (a process which is made that bit easier by the zoom-in facility). You can even silence bits of the sample or play it backwards – ideal for those unexpected Satanic rituals.

The data you've entered can be played back at 5, 7, 11, 22 or 44 kHz. This means that if you poach a waveform from a program, you can play it at its correct recording level. If you've got a very clear input, you can use a lower sample rate (such as 7 kHz) which means you can squeeze more into your available RAM space. Be warned though: sound samples take up huge chunks of the hard drive and can bloat the System file to humungous proportions.

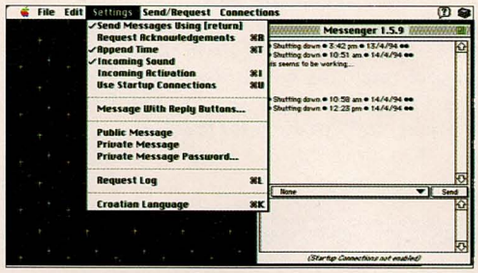


This *Soundbuilder* waveform is actually a Mac program, but, to be honest, it's not very tuneful. Maybe I should send it in to John Peel on Radio One.

Messenger

NETWORK SENDING UTILITY

Postcardware



Most people I know would rather send e-mail than pick up the phone – I'm not sure whether that says something about computing trends or my telephone manner.

Electronic mail is very big business. Microsoft is keen to corner this profitable area by bringing just one standard to the market, but there will always be room for utilities like this one which, while designed for smaller networks, are equally at home on large ones. This particular program relies on System 7's Program Linking ability though, so it won't function if you're using System 6.

To use *Messenger*, switch on the Program Linking, then run the program. You're now ready to send or receive messages from other similarly equipped Mac users. To do this, simply type your message into the lower portion of the screen, then click the Send button.

Messenger also enables you to send text to groups of people; deliver public messages; or send private messages which won't open without a password. You can send a beep down the line to get someone's attention, or inexplicably, send your message with Croatian characters.

On the down side, the program is a rather burly 800K, and unless you've got more than the standard 4Mb of RAM it'll be difficult to leave it running in the background. Still, this is a worthy program which performed well in our tests and appeared compatible with all the major Mac programs.

Cyclone

ARCADE GAME

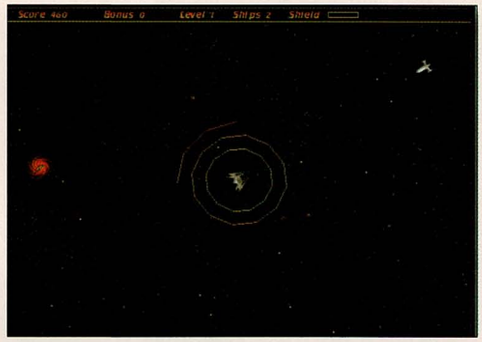
Shareware $25

What's great about the Internet is the way that amazing software just suddenly appears on it. One minute you think you've downloaded everything of interest, and the next, stonking games like this magically materialise in a games subdirectory. And all you have to do to play 'em is zap them down a phoneline and on to your Mac.

Cyclone is a shoot-'em-up. You control a small ship which is equipped with an ion gun. There's a laser cannon, which is surrounded by three shield rings, in the middle of the screen, and the idea of the game is to shoot it before it shoots you. Now, if that sounds easy, then you're in for a rude awakening.

You see, if you completely destroy a ring, the whole thing is replaced – so the idea is to contain trigger-happy impulses and simply shoot a gap in the cannon's shield. What's more, as soon as you get a bead on the laser cannon, it gets a bead on you, too – and believe me, its bullets are a lot quicker than your ship. It's not all bad news though; there are various power-ups which you can collect to boost your firepower. Oh, and there are some points bonuses floating around, too.

No doubt about it, this game is an unsung classic. The concept is simple and the gameplay's involving. *Cyclone* looks superb, sounds great and is so immensely irritating that we suggest you remove all sharp objects from your desk before playing. When you consider how cheap this game is, it's got to be one of the best buys in years.



It may not look like much, but it's got it where it counts. *Cyclone* is a compulsive and hugely frustrating blast-'em-up – and it's yours for just $25.

Home Finance II v1.2

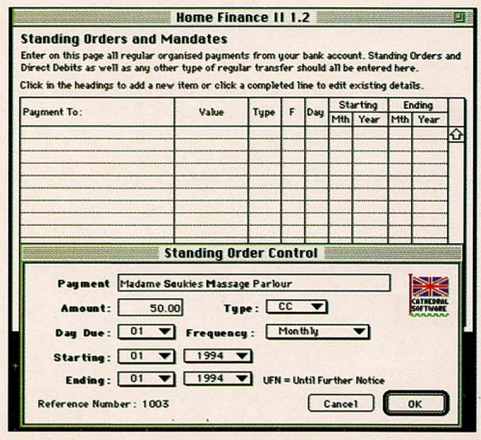
BANK ACCOUNT MANAGEMENT SOFTWARE

Shareware £30

The problem with a lot of shareware is that it's written by Americans. This means they tend to refer to things that either don't exist, or differ significantly from the British standard. This is especially true of financial programs. So it's a refreshing change to find a management program which has been written by a Brit to deal with the British banking system.

Home Finance II enables you to keep accurate records of the movement of money in and out of your bank or building society account. You give it an initial balance, enter things like standing orders, then tell it when you've written a cheque and – hey presto – it'll give you an accurate account balance.

The program can flag each of the different



Do you fill in all of your cheque stubs? Do you know what your account balance is right now? Nope, me neither. If you do though, 'cheque' out *Home Finance II*.

credits and debits on your account with the appropriate code letters. Then, when you want to know how well off you are – or in my case aren't – you can simply click on the **Statement** button and *Home Finance II* will reel off all your transactions. It will even provide you with a closing balance.

This program is well designed and easy to use, but I found myself wondering about the kind of people who'd use it. I can't even be bothered to fill out the stubs on my cheque book, and the prospect of coming home each evening and tapping all my transactions into a program, quite frankly, appals me. (Which probably explains why I'm permanently overdrawn.) Still, someone's bound to find it useful, and who am I to call them anally retentive?

Guy Friday

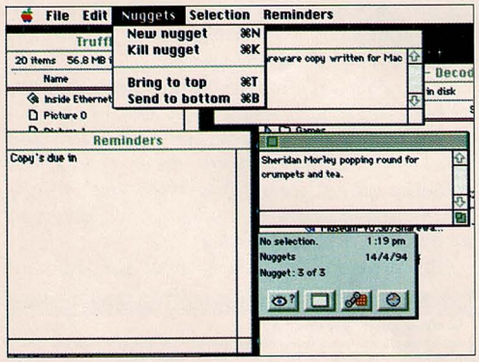
INFORMATION ASSISTANT

Shareware $18

Too much organisation is a bad thing. All these funky appointment, calendar, address and time organisers seem to forget that most of us aren't together enough to use them properly. Hence, the raison d'etre for this program. Yes, *Information Assistant* is the first program designed to work like humans: chaotically.

The program records information, which it calls nuggets. These nuggets can consist of anything you like: a telephone number, a reminder or a note of some ideas. These are all stored away until you suddenly remember that you've got to do something. Then you just enter the search option, enter a portion of the text you're looking for, and it zaps the appropriate nugget on screen.

If you're constantly forgetting to do things, then you can instruct *Guy Friday* to remind you. Your reminder can be set to go off just once, or every day, week, month or year. Its other key feature is a phone dialer. But then, I don't know many people who plug their phone in through the modem, so it's not an enormously useful feature. No doubt this will appeal to anyone who's tired of the politically correct programs which the Mac is famed for. *Guy Friday* encourages you to work in a sloppy manner, and I praise it for that.

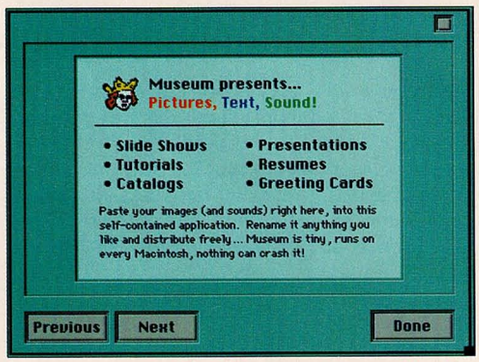


Guy Friday should appeal to the terminally disorganised. It works in exactly the same casual, sloppy and careless manner as most people. I love it!

Museum v0.5

PRESENTATION PROGRAM

Shareware $5


Museum presents...
Pictures, Text, Sound!
• Slide Shows
• Tutorials
• Catalogs
• Presentations
• Resumes
• Greeting Cards
Paste your images (and sounds) right here, into this self-contained application. Rename it anything you like and distribute freely... Museum is tiny, runs on every Macintosh, nothing can crash it!
Previous
Next
Done

Know someone with a Mac? Want to send them multimedia greetings? Design your own slideshow with *Museum*, then send it to them on disk.

Museum enables you to paste your own text, sound or pictures on to a series of pages, then save them as a stand-alone file (ie, the program is contained along with your document). You can then send it out, and the person who receives it can just click through the pages – it's like a multimedia telegram.

Using the program is simplicity itself. Once it's up and running, you can cut and paste what you like on to the pages from the clipboard. You can also customise the pages using the built–in colours, and even use it as a slideshow. If you regularly converse with other Mac owners, or you want to be able to quickly create a slideshow at school or in the office, then *Museum's* just the trick.

MacCheck 1.05

SYSTEM DIAGNOSTICS SOFTWARE

Public Domain

Unbeknownst to most of us, Apple is constantly releasing updates of all its system software. These include tweaked enablers, revised file software and diagnostic tools. *MacCheck* is one of the latter: a nifty little program which will scrutinise every aspect of your Macintosh, report any problems and even advise you on how to correct them.

This is one of Apple's own programs, so as you might expect, it's very well designed. The program loads to a simple but well designed front-end and installs its own diagnostic script. So, within a few minutes, you can perform a series of tests on both your hardware and software. Any problems which the program encounters are then included in the script.

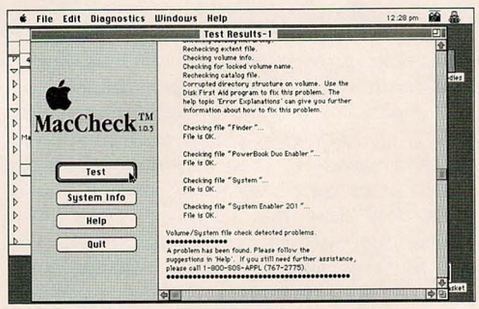
There are two main sections to the program. The first of these details every last facet of your system; from the version number of your ROM to the number of boot blocks in your system file, everything is scrutinised and displayed on-screen in a *TeachText*-style window.

The second section of the program actually checks the integrity of your Mac. It looks at its PRAM, searches for duplicate system files and checks your directories.

If a problem's encountered, *MacCheck* will tell you exactly what it is and list possible options – including the telephone number of the Apple helpline – just in case you're a bit bewildered by all the technical lingo.

MacCheck is an invaluable tool for home users and Systems Managers everywhere. While testing this program, I discovered that I had a corrupted directory structure on my hard drive. *MacCheck* advised me to run *Disk First Aid* on it in order to solve the problem, which I promptly did, and – bingo – problem solved.

Now, I don't know whether a corrupted directory structure is a humungous problem or not – I certainly wouldn't have been any the wiser – but it's good to know that there's a program that can easily diagnose potential problems and keep my Mac running at full strength. I'd advise everyone to get hold of *MacCheck* – if only to see how well your smiley-faced Mac really is. Highly recommended.



"Open wide and say 'Aaarrr.'" *MacCheck* will diagnose and help solve all your Mac problems... Well, nearly all.

WHERE TO GET IT

You can get hold of PD and shareware from a number of different sources. First, there are what's known as commercial PD houses (check the adverts in this issue of MACFORMAT for their contact addresses). These are companies which collect shareware and PD software, package it on to disks and then sell it on to you for a moderate charge.

Next come bulletin boards. To access one of these you'll need a modem, of course, but once you're connected you will find that there's a wealth of software available.

If you use the CIX bulletin board (modem phone 081 390 1244, any speed from 1,200baud upwards, log on as 'new'), check out the 'files2' and '93.files' topics in the 'mac' conference – and, of course, our own 'macformat' area. If you use CompuServe (voice phone 0800 289378 for an information pack) there is a multitude of different Mac areas; check the manual and the monthly magazine for details.

Finally, many Mac user groups (see page 100) have a range of PD and shareware available, and, of course, you can swap it with your friends – it's not software piracy; all of these programs are freely distributable.

Action Brush
Aggie
Ajax
Alyssa Bold
Alyssa Italic
Alyssa
American Caslon Italic Swash
American Text
Bass Script
Benson Oldstyle Medium
Benson Oldstyle Medium Italic
Bernhard Bold Cursive
Bevis Bold
Bevis Extra Bold
Blizzard Casual
Brandenburg
Campanile
CAMP CAPS
Candid Ballpoint
Carolina Brush
Cather
Cather Italic
Champion Script
Cooke Sans
Cooke Sans Italic
Cooke Sans Bold Italic
Cooper Five Black
Corvinus Skyline
Dom Diagonal
Furst
Furst Bold
GIBBY EXTRA BOLD EXTRA COND
Holly Script
Ingram Five

Iting Bold
Iting Bold Condensed
Iting Regular
Iting Regular Condensed
KARTOON
KARTOON BOLD

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Leon Text C
Liberty Foundry
Looking Glass
Lucius Ad Light
Lucius Ad Bold
Modern Blackletter

MORGAN-TWENTYNINE
NEULAND BLACK
New Bill C
Nissan
Nissan Italic
Nubian Foundry
Old English 5
Old Fashioned Script
Ondine 5
OPUS
Original Script
Peach Exquisite Light
Peach Exquisite
Peach Exquisite Bold
PIPPENS FIVE
Players Plain
Remy Medium
Remy Bold
Respighi Script
Roman C Shaded
Romana Estrecha
Sapir
Schneidler Swash
SESAME
Smoke
STENCIL DISPLAY
Typewriter Special
Typo C-Upright
Typo Roman
Van Dyke-Outline
Vatican
Venetian Script
Wycombe Five
Zeppelin Script

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Into *the* Internet

You've got the hang of this comms stuff, and you're now itching to spread your net further and see for yourself what's on the Internet. Here's how to do it...

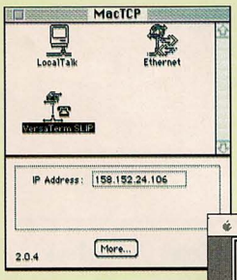
It's all very well having the world at large going on about how wonderful the Internet is, but getting connected to it via a modem is anything but simple for Mac owners. You need network client software, something to make that software think that it's connected to a server over a modem, and a handful of separate utilities to give you mail In and Out. You'll need yet more utilities to send and receive Usenet messages, and to provide file transfer capabilities. You might also want to Telnet around the world's networked computers, for which you'll need even more software, and up until very recently the standard way of doing all this on a Mac was to use a large handful of Mac shareware programs. But MACFORMAT can exclusively announce the startup of a new service at Demon, the UK's favourite Internet connection provider, which makes sending and receiving mail, at least, a whole lot simpler. Alas, you'll need to grasp the basics of Internet working first. This will take a couple of hours of your time, a credit card, and Mac equipped with a modem.

On your marks...

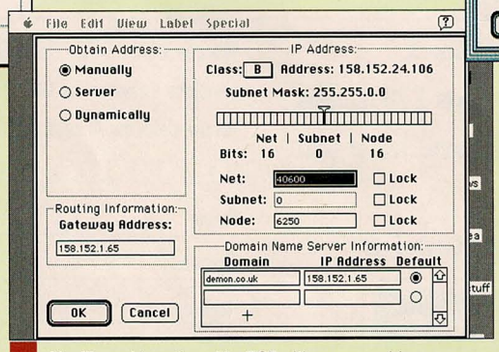
The key to Mac Internet working is a Control Panel called *MacTCP*. TCP stands for Transport Control Protocol and it provides what amounts to a virtual link between computers connected to the Internet. At the moment you have to buy *MacTCP* – it isn't freeware or shareware. Three legal ways of obtaining it are to buy it from Apple Direct, get it bundled with a commercial Mac software application such as *VersaTerm Link* or pick it up with *The Internet Starter Kit* book (reviewed in MACFORMAT issue 10 – if you missed that issue, see page 94). This leads you to your first quandary. Are you going to use shareware applications to hook into the Internet, or will you be using a commercial suite of programs? You'll need to decide before you go much further – but in a nutshell most recreational users prefer low-cost shareware, while many commercial outfits will prefer the stability and ease of use of commercial Internet programs.

MacTCP knows nothing about modems, so you will need a second utility to enable you to use your Internet connection over a phone line. There are two methods: Point-to-Point Protocol (PPP), or Serial Line Interface Protocol (SLIP). Purists will argue that PPP is much more advanced than SLIP, but by and large SLIP is in more widespread use. If all of this seems a bit long-winded, Demon will supply you with a Mac installer disk if you want to use shareware programs. The process of getting going is much easier with *VersaTerm Link*, a commercial program which doesn't cost much

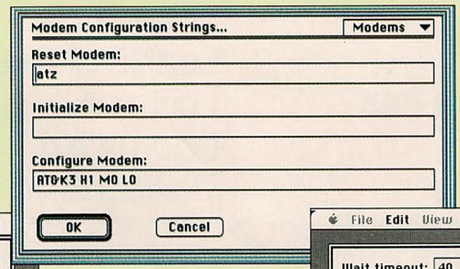
GETTING ON TO THE INTERNET WITH DEMON



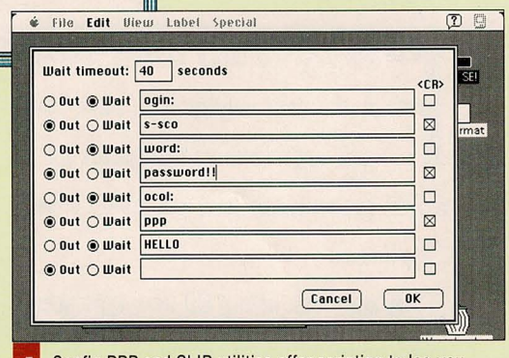
1 Call Demon (voice 081 349 0063) to open an account. Ask for the *Mac Starter Kit* disk if you want to use shareware. It contains everything you need except *MacTCP*, which comes with commercial programs like *VersaTerm*. Demon also supplies it with a Mac Internet book. Drop *MacTCP* in your System Folder and begin.



2 You'll need to set up *MacTCP* with your machine name. Here's what it looks like for my account (158.152.24.106) . Put your machine number there. You'll need to copy the Gateway address and domain details if your screen doesn't look like this.



3 You'll need to tell SLIP or PPP how to set your modem. These are the commands to make PPP work with a Hayes Optima. The most important is AT&K3, which sets hard handshaking.



4 Config PPP and SLIP utilities offer scripting to log you automatically into the host server. Your login script will look broadly similar – don't forget to click the box to add a carriage return to the end of each string you send.

more than the total shareware and *MacTCP* fees you'll be paying.

You'll need to choose your modem carefully for dial-up Internet use. Your first choice will be for a modem and cable that can be configured to use hard-handshaking (RTS-CTS) because use of XON/XOFF codes will interfere with your TCP connection. Secondly, you should get the fastest modem you can afford which is supported by your Information provider. At the moment this means using V32 bis modems, driven at 38,400 bits per second. (You can buy the reliable model we use ourselves, the Mac & Fax fax modem, at a bargain price direct from MACFORMAT – see page 89.) While modems that can run at 2.88Kbps are here, Mac shareware hasn't yet caught up with these fast speeds.

Finally decide what your 'machine name' will be. This is the address that will identify your connection. Whatever prefix you choose it will finish in .demon.co.uk if you choose to use that company's services. Then phone Demon and ask for an account to be opened. You'll be given an address number such as 158.152.9.22 which you'll use to set up *MacTCP*. You'll also be told about passwords, and why you should change them every week.

The shareware route

Electronic Internet mail presents a thorny problem for UK Mac users. This is because there are two main mail 'standards' in use on the Internet: Post Office Protocol 3 (POP3) and Simple Mail Transfer Protocol (SMTP). Many of the shareware and commercial programs use POP3 but up until recently this service hasn't been available from Demon. The trick is to use an SMTP mail program called *Leemail* to get your mail, and a second program (*Eudora*) to send it. While this kludge works it's hardly desirable, but Demon will have installed and implemented POP3 by the time you read this. This means that you can use a single program to send and receive your mail (*Eudora* for shareware users, *VersaTerm Link* for commercials) and it's a great step forward, although there's an extra charge for using the service. Other POP3 mail programs which will now work over dial-up include *TechMail-S*, which has its own built-in SLIP software.

A similar problems exists with Usenet news. There are no Mac shareware programs which will read News on to disk for later perusal. This means you are paying fees to read news live over a phone line, though again there's a three-program kludge to overcome this. But *VersaTerm* has a fine off-line newsreader built-in which can save the costs of the program within a short time.

For file transfers most recreational Mac users will be happy with *Fetch*, an FTP application, and there are dozens of programs for Telnet-ing around the Internet.

CIX or Demon?

There are already a number of MACFORMAT readers using CIX, the popular bulletin board. CIX has an Internet facility, as do a great many of the First Class-based Mac bulletin boards. So what's the difference between the CIX Internet service and those offered by Internet providers such as Demon?

With a TCP connection operating through SLIP or PPP your Mac is turned into a node on the Internet. This means that files are transferred directly to your hard disk and you can set up as many extra users on your machine name as you might need. If you wished you could also set up your Mac node as a remote FTP server – users could log into your on-line machine via modem and transfer files – if it weren't for the exorbitant telephone call costs in this country.

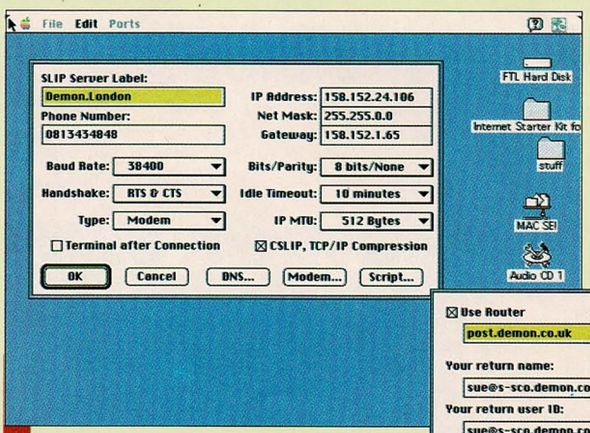
Conversely CIX (and some other bulletin boards) offer a terminal connection to the Internet. CIX itself is the network node, which stores FTP files until you download them across your terminal connection using *Z-modem* or similar. This can mean you are paying twice the

GETTING STARTED

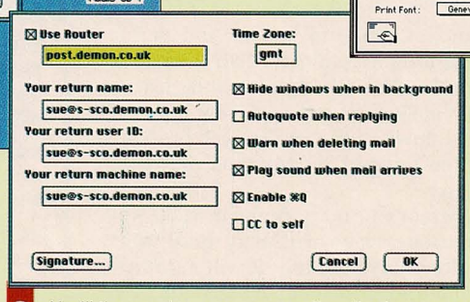
Demon Internet Services can be reached on 081 349 0063 (voice). Account set-up costs £12.50, and thereafter you pay £10 per month net. SMTP mail is free, but there is a charge for using the POP3 service. To save your phone bills, there are local access points in London, Reading, Warrington, Edinburgh, Leeds, Bradford, Hull, Sheffield, Sunderland and Cambridge already working or due to be installed imminently.

Vital software:

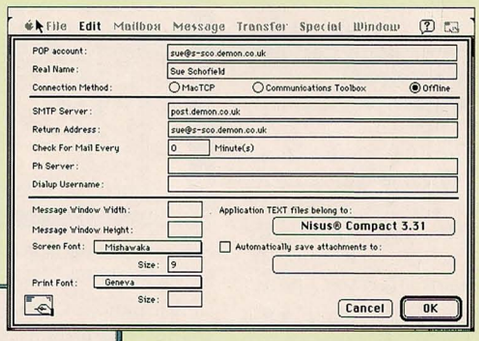
- *MacTCP*: free with *VersaTerm*, £37 from Apple Direct (081 449 3430), or £27 bundled with the *Internet Starter Kit* book from Demon. If you are a student your university might have a site licence. Check with your network guru.
- *The DIS Mac Starter Kit* – all the shareware you need to get started: £7.50 from Demon.
- *VersaTerm Link* – The ultimate mail, news, ftp and telnet utility is bundled with *VersaTerm 5* together with *MacTCP* – everything you need for £149 net from Principal on 0706 832000.



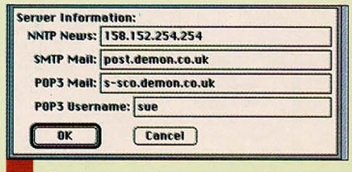
5 Make sure that you set up SLIP or PPP to use the correct addresses. This is a SLIP configuration screen.



6 You'll then need to set up your mail applications to use the mail servers at the far end of the Internet connection. This is the screen for *Leemail*....



7 And this is the setup for *Eudora*. If you subscribe to Demon's POP3 service, then *Eudora* will handle all of your mail for you.

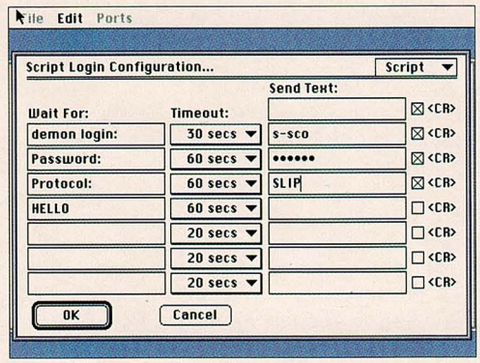


8 Finally, here's the setup for *VersaTerm Link*. Two-way off-line mail, off-line news, ftp, and telnet utilities in one sleek package.

phone costs to get a file, but this is probably OK for occasional use. A terminal connection can't offer a true machine-name connection, which probably is not a problem – unless you want more than one e-mail address per connection. CIX also offers something called BatchFTP. It's a utility that enables you to tell CIX which files you want, and then CIX goes and gets them for the next time you log in. This is useful, but doesn't help get Mac users away from CIX's awful command line interface.

Finally, you get to use your Mac's graphical front end with many of the Mac Internet programs around. With a terminal connection you are limited to typing in direct commands, which might be OK for a giggle the first time around, but navigate rapidly around a remote server with a mouse and *Fetch* or *VersaTerm*, and you'll soon realise why a network Internet connection can pay for itself in a short period of time. Demon also has local connections in many parts of the UK, and the prospect of cheap rate local calls will be another bonus to prospective users. *Sue Schofield*

Sue Schofield is the author of the award-winning *Modem & Communications Guidebook* (ISBN 1-85870-000-0) and the forthcoming *UK Internet Book*. You can reach her as sue@s-sco.demon.co.uk.



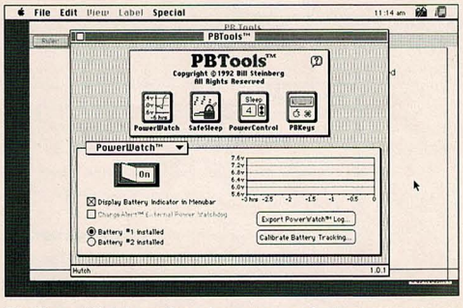
A you'd expect, everything can be customised to suit your needs, right down to the time the machine will wait to log-on.

Who's got the Power?

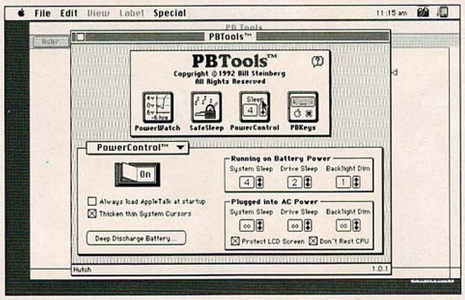
You've got a PowerBook and everything's going well but you'd like a better way of monitoring your battery usage. And what about security...?

More good news for PowerBook users. Here's another utility to make our restricted keyboard lives a bit easier. *PB Tools* was designed to overcome all those niggly features that cause grief and much rolling of the trackball. I hope the Apple systems programmers are reading.

The most valuable feature of *PB Tools* actually works in the background without any need for tweaking. It automatically configures the PowerBook's performance according to the power source you're plugged into. If you're running off the mains it'll crank up the performance. Change to battery and performance will drop accordingly. This is extraordinarily useful. The other groovy little feature is *PB Tools'* ability to turn AppleTalk on or off from a pull-down menu on the desktop. Not a massive step forward for Mackind, but great nonetheless.

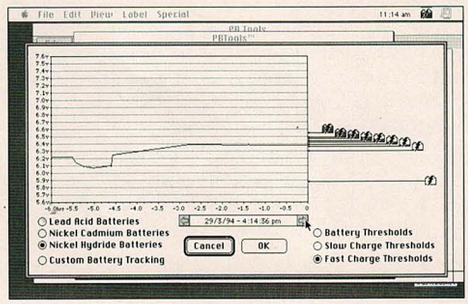


The PowerWatch section observes your battery over a long period. The graph on the right show the voltage it contains.



Hotkeys enable you to save loads of battery power by putting the System, hard drive or backlight to sleep.

The program's primary function is to supply an accurate view of exactly how much battery juice you've got left. It will automatically calibrate itself to your battery and give you an accurate view of precisely how much on-line time you've got. This information is displayed in a battery icon at the top right of the desktop. The icon will also indicate whether you've got AppleTalk switched on and whether the hard drive or CPU is sleeping. All dead handy.



Using the battery calibration graph you can get a very accurate picture of how much power you've got left.

You bought your PowerBook to use on the go, right? But security's a bit of a problem, isn't it? *PB Tools* won't actually stop someone from walking off with your Mac but it does include a password function which will display a pithy message of your choosing at startup or when it sleeps. In order to get in you have to enter a password. Great for paranoid punters.

Combine all these features with a series of very useful hotkeys for waking/sleeping the hard drive, finding the cursor and beeping when the [caps lock] key goes on and you've got a jolly useful utility package. *PB Tools* is kind of like a TV remote control – ultimately it doesn't actually do much, but it makes life a bit easier. *Andy Hutchinson*

PB Tools

PB Tools costs £69.95 (rrp), and is available from Frontline on 0256 463344 or Ingram Micro on 0908 260422. It requires a PowerBook with System 7 or better.

Good points

Loads of time saving-saving shortcuts and a funky battery calibrater.

Bad points

It's a bit pricey. The battery threshold calibrater is a bit confusing.

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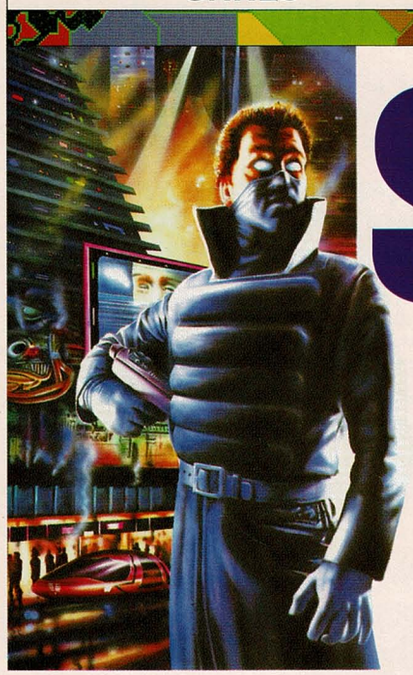


Syndicate

Greed is good, lunch is for wimps and Uzis are for grannies. Can you survive the brutal world of the Syndicates? (Try our exclusive cover disk demo!)

The best science fiction has some basis in fact. HG Wells wrote his stories during the incredible developments of the Victorian era, when it seemed that anything was possible. Isaac Asimov's stories blend real 20th century scientific developments with predictions of what could occur. And Sean Cooper and the rest of the Bullfrog team reckon that the world's being ruled not by governments or presidents, but by increasingly large and increasingly powerful companies.

This is the premise of *Syndicate*. The world is no longer divided into countries; the corporations have bought out the governments. They control every aspect of life, death and fast food and nothing happens without their say-so. As a thrusting executive for a small European syndicate, your modest aim is to take over the world.

So how do you get ahead in the syndicate? The answer is to take over other companies by any means necessary. Simply (simply?) enter all of the 50 territories (each controlled by a syndicate) and complete a mission therein. It might involve an assassination, it may require you to persuade someone to join your ranks or simply to tool up, stroll into town and blow the enemy agents into a pulp of Lycra™ and blood.

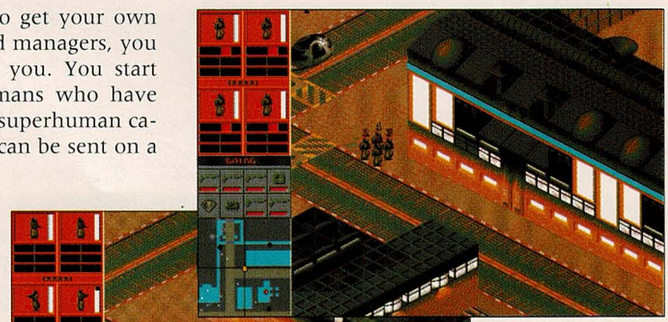
Of course, you don't want to get your own hands dirty and so, like all good managers, you get someone else to do it for you. You start with eight cyborg agents (humans who have been genetically modified with superhuman capabilities), up to four of which can be sent on a mission at one time.

Initially your cyborg agents are badly equipped – basic models if you will. As the game progresses you can invest in research and development to improve their body parts and their armoury using money which you raise by taxing the good citizens of the territories you control.

The missions themselves are viewed from an isometric (three-quarter angle) viewpoint. The main portion of the screen shows the city zone and your agents, while on the left are a scanner, an inventory and readouts of your agents' health. Movement and combat are controlled by a simple point-and-click interface.

However, this is no simple shoot-'em-up. Each of your cyborgs can be fine-tuned to behave in a certain way by injecting them with various performance-enhancing drugs. In effect this means that your cyborgs can quite happily look after themselves. It gets better though: you can split your team up. For instance, one could act as a sniper while the others get on with the mission objectives.

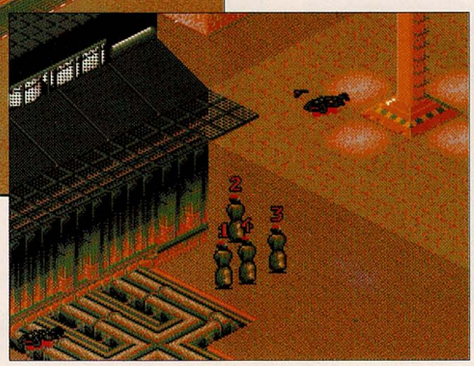
The futuristic cities look brilliant, sort of *Blade Runner* meets Milton Keynes. My favourite touches are the TV screens on the sides of buildings which display adverts for soft drinks and nutrition pills, and the sampled speech of the cops as they order you to drop your weapons. The buildings look the part, as do the fully-functional cars, wagons and trains



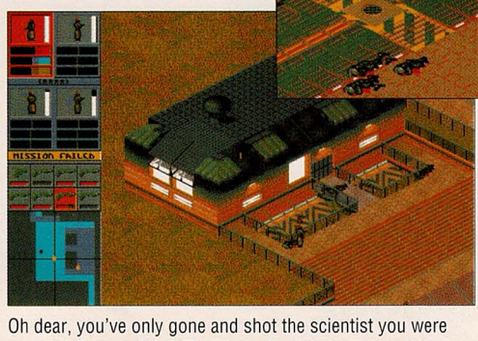
That's it: the job's done, now all you've to do is get the hell out of there. You're still vulnerable in a car though – police and enemy agents will quite happily blow you to smithereens given half the chance.

Another day, another blood bath – Milton Keynes was never like this! In cluttered towns like this one, it's usually best to boost your cyborg's perception, just in case enemy agents are lurking round the next corner.

Some missions involve evacuating the city. So, if you've blown up all the cars, you're in deep trouble: the Mayor won't send you a Christmas card, for a start.



After a little skirmish, two policemen have come off rather worse than the cyborgs.



Oh dear, you've only gone and shot the scientist you were meant to be poaching. Time to go back to the computer aided drawing board.

A rather large battle has taken place here. (Well, that big pool of blood's a dead giveaway.) Five agents have been 'retired' and your cyborgs are now free to nip across and steal all their guns.

Enemy agents are just as well equipped as you are – if not better – so if you see one coming, shoot first and ask questions later. Like in 1998.

These three guards are protecting a scientist. Your mission is to persuade him to join your side. The guards aren't too happy about this, though, so you have to terminate them.

Once you've assassinated your target(s) you need to get the hell out of there. Some fool's left the keys in this futuristic VW Beetle. Hop in, lads!

which trundle about the city – I especially liked the trains. (Does that make me an anorak?)

Syndicate's an exceptionally playable game. It gets so tense and frustrating that you almost spontaneously combust with excitement. And it has a habit of lulling you into a false sense of security – just as you think you're home free, 20 enemy agents calmly stroll out of a building and convert your cyborgs into pavement pizza.

That's not to say that the game's overwhelming hard though – it's got a great difficulty curve which lets you familiarise yourself with

Syndicate's an exceptionally playable game. It gets so tense and frustrating that you almost spontaneously combust…

everything before the going gets tough. Five of the missions are complete sods though – they're so annoying that they'd have Cliff Richard swearing like a trooper. Despite that, this is one game that you'll never give up on because you can't progress immediately.

Of course, *Syndicate* has its faults. The most irritating is when your agents are hidden from view and someone else (whom you can't see) starts firing on them. There's nothing for it but to switch on your agents' panic mode so that they blow the hell out of everything in sight.

I'd also take issue with the movement of the cyborgs. If you have more than one agent on a mission and you click on a location for them to move to, one or two will get left behind – if you're in a firefight it can get very frustrating.

Driving the cars isn't terribly easy either. In the future it would seem that cars have built-in cab drivers which take you by the longest, most tortuous route you can imagine. You click on the road you'd like to go down and the car's built-in cab driver circuitry takes you via Rhyl.

As frustrating as these faults are, though, I find it hard to criticise *Syndicate* too much. There's so much gameplay in there that it'll rob you of all your free time, and if you've got a Mac at work your productivity levels will take a dive. The fact that the game's in bite-sized missions makes it even worse. You tell yourself that you'll have another crack at 'that' mission and before you know it you've lost an hour.

More importantly, if you have a problem with violent computer games then I'd steer well clear of this one; *Syndicate's* awash with blood. Admittedly it's all very comic book and not terribly detailed, but some levels still end up looking like an abattoir. Every agent you kill falls to the ground in a pool of blood, and there's nothing to stop you gratuitously picking on citizens who are just going about their business.

This feeling of anarchy is heightened by the sampled sounds of the weapons: unleash a rocket and it'll swoosh away. If it connects, the target will run around in flames, screaming, before turning into a smouldering pile of ash. Now I realise that it's all very tongue in cheek. I realise that it's just a computer game. I realise that it's very unlikely that you'll want to take an Uzi and go on a killing spree after playing the game. I even realise that it's a deliberately ironic comment on violence, but even I was a bit shocked the first time I let off a gauss gun in the game. If you have a problem with a movie like *Reservoir Dogs* then buy a golf game instead.

Syndicate's a stonking game with a very tight plot, superb graphics and sound, and lashings of futuristic violence. If you've had an irony bypass, however, or can't differentiate fantasy from fact, then avoid. *Andy Hutchinson*

SYNDICATE

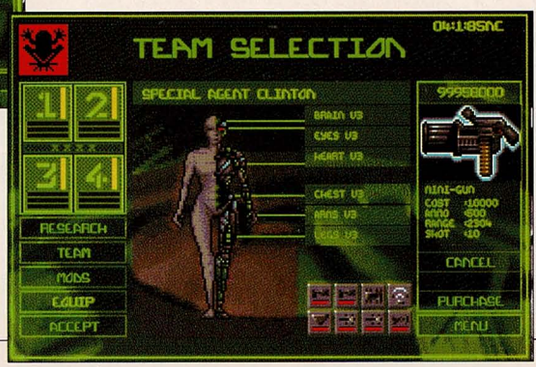
Price: £44.99. From: Electronic Arts, 0753 549442. Out: Mid-May. Requires: 2.5Mb of RAM, System 7.0 and later. Will run on black and white or colour Macs. Requires 12Mb of hard drive space in colour or 4Mb in mono.

Graphics Superb cyberpunk buildings and characters.	91%
Sound Groovy soundtrack and clear samples.	90%
Gameplay Infuriatingly addictive.	93%
MACFORMAT RATING	92%

MISSION BRIEF
20:12:85NC
CLEAN SWEEP.
COMBAT SWEEP.
AN ENEMY SYNDICATE WAS BEEN EXPERIENCING PROBLEMS WITH THE POPULATION OF A NEARBY CITY. THIS IS MAINLY DUE TO SUBVERSIVE TECHNIQUES FROM OUR ESPIONAGE DEPARTMENT.
AS A RESULT OF THIS THE ENEMY SYNDICATE WAS PULLED OUT MOST OF ITS FORCES FROM THE SURROUNDING AREA AND THE CITY WAS FALLEN OPEN FOR US TO TAKE.
13283
INFO
300
ENHANCE
ACCEPT
MAP
MENU

You're given a brief at the start of each mission. This one's simple – just eliminate all the enemy agents. No messing.

In order to keep up in the arms race, you'll have to spend money on research. Here we're investing heavily in the more powerful, longer range weapons.



Once you've spent the money on research you can kit your field agents out with state-of-the-art weaponry. Here Agent Clinton has lasers, a mini-gun and a bomb.

Once you've acquired an enemy syndicate's turf, you can tax the people to fund your campaign. Here the Scandinavians seem quite happy to pay 35% tax.

Crystal Caliburn

Andy Hutchinson would just like to make it known that he'll make no reference to pinball wizards, Soho, Brighton or silver balls during this review.

FLIPPERING HELL

1 Manage to get the ball into this lock position and Merlin will reward you with a present. Options here include replenished shields, an extra knight, an extra ball or, possibly, an extra locked ball. He's a star, is Merlin.

2 The secret to getting a really high score is to get the multiball function working. To do this you have to 'lock' three balls by shooting them into specific places. This is one of those places. It's tough to hit.

3 This is the Camelot Castle Ramp. If you manage to shoot this three times in quick succession then you'll clock up 150,000 points for each one.

4 The Dragon Cave underground lane is actually one of the easier targets to hit. You get 20,000 points for every loop that you manage to pull off. Oh and you can lock your balls in here too. Dead handy.

5 Then, of course; there are your shields. Should the ball head down this escape tunnel (and, believe me, it will do) then a pin will fire it back up the table. That is if you've got any energy left. Otherwise you can kiss that ball goodbye.

Do you know the reason why pinball has enjoyed a renaissance over the last couple of years? *(Go on then, tell us – MACFORMAT readers.)* Well I'm glad you asked; it's because it involves an element of chance. No matter how bad you are at video games, you can always learn the patterns and strategies needed for a specific title. In fact, that's where computer games fail. Pinball, on the other hand, succeeds because mechanical objects – working in conjunction with gravity and WD40 – are always destined for slight imperfection, meaning you can still lose, even if you've got lightning fast reactions. So the real question is: can a simulated video game imitate this element of chance?

The latest softie to have a whirl at pinball is the American company LittleWing. They're the same bunch who brought you *Eight Ball Deluxe*, if you remember. In the packaging blurb which accompanies *Crystal Caliburn* (are journos the only people who read such minutiae?), the company claims it wanted to recreate an '80s style pinball game. The emphasis is, therefore, on shooting the ball up lots of ramps rather than activating dot matrix video modes. Oh, and it includes a multi-ball function for all you train-spotters.

The legend of King Arthur forms the game's theme. The Caliburn of the title is the pseudonym for Excalibur, Arthur's fish knife. As a result the game involves all sorts of weird stuff like collecting the Holy Grail (you get big points for that), killing the devil dragon, releasing Merlin and powering-up Excalibur. But basically, folks, it involves whizzing a little ball around a playfield which has been designed to simulate Newton's laws.

The game requires a 256-colour Mac and, if you've got a 13-inch monitor, the screen will scroll slightly when you use the plunger. Those of you who boast more than 13 inches will, however, be treated to the whole table all at once. That's my first gripe, actually – the fact that the table looks so small. I realise the problems involved in fitting so much information into such a small space, but it's a bit fiddly, especially when you're trying to see which features you've scored.

Crystal Caliburn offers a very fast table. Should you manage to shoot a few ramps, you'll find the ball whizzing around faster than an accelerated particle with go-faster stripes. Fortunately, like most pinball games these days, there are a couple of safety features designed to save you from humiliating two-second games. For instance, the two side escape tunnels have shield features, which send the ball hurtling back up the table. They don't last forever though, so use them sparingly.

Crystal Caliburn is the first Mac pinball simulation to feature a multiball function. This will no doubt please all you pinball purists out there.

Lots of time has been spent on getting the small details right. *Caliburn* is well designed and the ball mechanics are some of the best I've ever seen (and that includes those found in *Pinball Fantasies*); it even has a good crack at simulating chance. If, however, you get frustrated playing real pinball, then you might end up cursing this game. There again, given that it doesn't eat 50 pence pieces, it's a cheap form of practice for mere mortals like myself. The clinically insane, people suffering from stress, bad losers and the MACFORMAT editorial team should steer clear, though – this one tends to eat time quicker than a Tardis. *Andy Hutchinson*

CRYSTAL CALIBURN

Price: £44.99. For more details contact Starplay Productions Inc, PO Box 217, Greely, CO, 80632-0217. Requires 4Mb of RAM for colour on System 6.07 and higher, and 2.8Mb of hard drive space. Requires a 13-inch 256 colour monitor (though it will work with 256 greys). Controls: mouse and keyboard.

Graphics Detailed and attractive, though a little on the small side.	83%
Sound Great spot effects and funky voice samples.	85%
Gameplay Very fast, very tricky and bloomin' frustrating. Just like the real thing.	84%
MACFORMAT RATING	86%

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MACFORMAT promotions

MACFORMAT has scoured the land for the best prices on the best Mac products to bring you this selection...

Style victims

Yes, you too can be the proud wearer of one of these strictly limited edition MACFORMAT T-shirts. Available in large and extra large in a fetching dark blue, these T-shirts are ideal to impress your friends with your Mac knowledge.

MACFORMAT T-Shirt
Price: £9.95
Order code: MACFTSL (large), MACFTSXL (extra large)

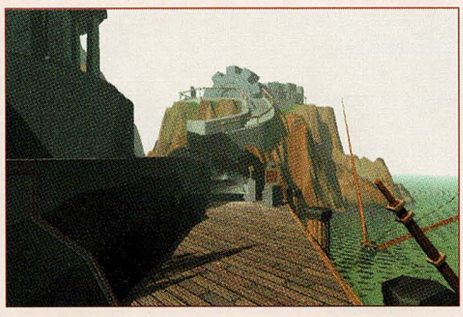
600Mb of programs!

The BMUG PD ROM contains over 600Mb of the best shareware software from all over the world, collected by the Berkeley Macintosh Users Group and put on one CD-ROM (1994 edition).

BMUG PD ROM CD
Price: £39.95
Order code: MFBMUGCD

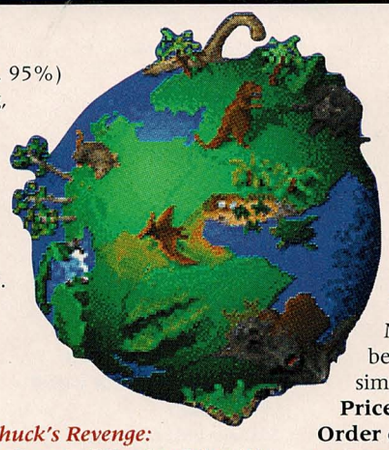
THE MACFORMAT CLASSICS

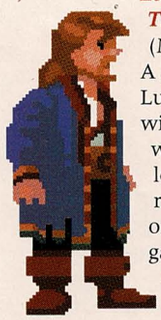
In the last year, MACFORMAT has awarded its coveted Classic award to just four truly outstanding games. We think these games are the ultimate in gaming on any computer, not just the Mac, and we are proud to offer them to you direct from the magazine. They're a must, simple as that.



Myst
(MACFORMAT February, 95%)
An adventure that has you exploring an island world with enthralling puzzles to solve and luscious visuals. This graphics extravaganza comes to you on CD-ROM.
Price: £39.95
Order code: MFMYST

Civilization
(MACFORMAT June, 95%)
Start with nothing, conquer the world and reach the stars in just 4,000 years. Simply the most addictive strategy game ever written.
Price: £34.95
Order code: MFCIV

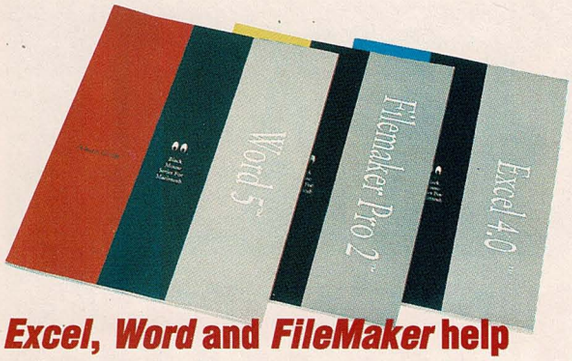




LeChuck's Revenge: The Secret of Monkey Island 2
(MACFORMAT September, 95%)
A graphic adventure from LucasArts full of excruciating wit and fiendish conundrums, with a superb soundtrack, lovely animation and memorable characters. In short, it's one of the best adventure games ever conceived.
Price: £39.95
Order code: MFMONK2

SimCity 2000
(MACFORMAT February, 95%)
The updated version of the original Macintosh classic, *SimCity 2000* is a beautifully illustrated and finely detailed simulation with hours of gameplay.
Price: £37.95
Order code: MFSIMC

ORDER NOW! CALL THE HOTLINE ON 0225 822511



Excel, Word and FileMaker help

In the same series of Black Mouse guides are books teaching you the best of Microsoft *Excel 4*, Claris *FileMaker Pro* and Microsoft *Word 5*. All are available at the same bargain price.

***FileMaker Pro* book**
Price: £7.95
Order code: MFFMPB

Microsoft *Excel* book
Price: £7.95
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Price: £7.95
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Need help with ClarisWorks?

If you need to know more than the manual tells you, then try this Black Mouse guide to *ClarisWorks*. Inside you'll find pages of practical advice and worked examples to help you get the most from your software. Special MACFORMAT offer – £2 off RRP.

***ClarisWorks* book**
Price: £7.95
Order code: MFCWKB

The essential shareware collection

No fewer than ten high density disks, packed with the very best shareware and freeware programs. No demos, just top-notch shareware software. Too many to list, but included are the latest versions of: *Disinfectant*, *SoundMaster*, *Apollo*, *BeHierarchic*, *FileTyper*, *Maelstrom*, *Graphic Converter*, and over 100 more. All programs work with System 7 and a colour monitor – some require them. Ten disks for just £19.95!

Shareware collection vols 1-10
Price: £19.95
Order code: MFSHARE1

SCSI problem solver

Our Mac Answers section is frequently asked about problems with external SCSI devices, like scanners or external hard disks. Nine times out of ten the query can be traced to a problem with termination – the last device must either be terminated internally (the manual will tell you if it can be), or you must fit an external terminator. They can be little blighters to get hold of, so MACFORMAT has got some for you.

SCSI terminator
Price: £14.95
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These fonts have been chosen to provide you with a huge armoury of really classy faces to use. They are TrueType fonts, and come with the TrueType INIT, so they can be used with either System 6 or 7 – full installation instructions included. They work with any printer, including LaserWriters and StyleWriters, and look excellent on screen, with no 'jaggies'. You won't find a better value way of adding style to your documents anywhere!

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Arial light condensed
Arial condensed
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Baskerville semi-bold
Baskerville semi-bold italic
Bell
Bell italic
Bell bold
Bembo
Bembo italic
Bembo semi-bold
Bembo semi-bold italic
Bembo bold
Bembo bold italic
Centaur
Centaur italic
Centaur bold
Centaur bold italic
Colonna
Ellington
Ellington italic
Ellington bold
Ellington bold italic
Engravers Old English

ENGRAVERS
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Footlight light italic
Footlight bold
Footlight bold italic
Garamond
Garamond italic
Garamond bold
Gill Sans light
Gill Sans light italic
Gill Sans
Gill Sans italic
Gill Sans bold
Gill Sans bold italic
Gill Sans extra bold
Gill Sans ultra bold
Gill Sans condensed
Gill Sans bold condensed
Gill Sans bold extra condensed
Goudy Old Style
Goudy Old Style bold
Goudy Old Style catalogue
Goudy Old Style catalogue ital
Joanna
Joanna italic
Kino
Lydian
Lydian cursive
MATURA
News Gothic
News Gothic italic
News Gothic bold
News Gothic condensed
News Gothic bold condensed

Nimrod
Nimrod italic
Nimrod bold
Nimrod bold italic
Onyx
PERPETUA TITLING LIGHT
PERPETUA TITLING BOLD
Photina
Photina italic
Photina bold
Photina bold italic
Placard condensed
Plantin light
Plantin light italic
Plantin
Plantin italic
Plantin semi-bold
Plantin semi-bold italic
Plantin bold
Plantin bold italic
Plantin bold condensed
Rockwell light
Rockwell light italic
Rockwell
Rockwell italic
Rockwell bold
Rockwell bold italic
Rockwell condensed
Swing bold
20th Century ultra bold condensed
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fi ffi ¼ ½ ⅛ ⅜ (Plantin Expert bold)
fi ffi ¼ ½ ⅛ ⅜ (Plantin Expert bold italic)

Get networked!

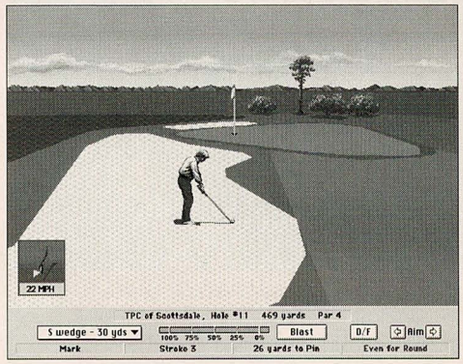
Networking two Macs means you can move files without using floppies, run applications on the other Mac, and share printers. You'll need one kit per Mac (includes about 2m of cable) and an extension cable if your Macs are further than 2m apart. System 7 is required (not inc.).

AppleTalk connector kit
Price: £29.95
Order code: MFNET
10m extension cable
Price: £19.95
Order code: MFEXT

THIS MONTH'S MACFORMAT SPECIAL

The original *PGA Tour Golf* kept us amused in the MACFORMAT office for months – as soon as the working day was done (honest!) it was "who's in for a round of *PGA* then?" and we'd play until they chucked us out and locked the building behind us. Now Electronic Arts has released the sequel, and in the review we said: "Do I recommend *PGA II*? You bet" and gave it 87%. Makes you wish you had your own copy, doesn't it? Well, now you can – for just £37.95 all in. Fore!

PGA Tour Golf II
Price: £37.95
Order code: MFPGA2



After a little practice you'll be avoiding the bunkers like a genuine golf pro. Unlike the clot who took this screenshot. Honestly, you just can't get the staff these days.

The silliest software ever!

UnderWare is a screen saver, and it can customise the desktop background, but it's much more than that. It's fun. In fact it's downright silly. *UnderWare* animates the screen as you work! Tarzan swings in and collides with the window, a thief makes off with your 68000, babies crawl everywhere, a dragon burns holes in the desktop and so on. It even runs *After Dark* modules in the same way. *UnderWare* has to be the ultimate Mac customiser! We gave it 93% in February's issue. Imported direct from the US, where it costs $59.95, MACFORMAT brings you total silliness for just £34.95.

Underware
Price: £34.95
Order Code: MFUNDER

The ultimate value modem

We rate the US Robotics Mac & Fax as one of the best modems around, and now that USR have slashed their prices we can bring it to you at an extraordinary £220.
Only six months ago it was £469!

The Mac & Fax is a super-fast modem that can transfer data at up to 56,000 bits per second – 20 times as fast as a typical 2400 modem. It does this by combining raw speed (14,400 baud) with the v32 compression system which shrinks the data before sending it. The modem works with any on-line service and comes complete with a Mac cable and all the software you need to access computers worldwide.

As well as being a modem, the Mac & Fax includes software which enables you to send faxes direct from your Mac, simply by printing from your document as normal, and the Mac & Fax can receive faxes too.

All in all then, it's pretty fab and you definitely shouldn't be without it. Our price for this remarkable piece of kit? Only £220!

US Robotics Mac & Fax modem
Price: £220
Order code: MFMODEM

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A particularly exciting moment. You've just shot a mine, and heady with this unexpected success, you decide to zip around aimlessly for a bit, watching the scenery.

But of course you soon need to get back into the thick of things. There are hundreds of things to do. You could shoot a ship, or, erm... Well, that's it, really.

The first five levels are trainers, so you don't get a score, but you can access them at any time. You have to reach level 20 before the game saves your position.

Astro Chase 3D

Can you survive the depths of space? The asteroids? The enemy ships? The monotony?

There's a particular theory regarding shoot-'em-ups which seems to have proved right time and again. It's this: the longer and more verbose the instruction manual is for any given blast-'em-up, the worse that game will be. So for instance, *Asteroids* can be described in a single sentence, and it's a marvellous game. *Astro Chase 3D*, however, takes a 25-page manual to put its message across, leading you to wonder what kind of game they're trying to camouflage with all that flummery.

Astro Chase 3D really is quite straightforward: you're in a ship in space, viewed from behind in 3D; you accelerate, you fire in eight directions, you avoid planets and ships, you shoot mines before they reach Earth and destroy it. Then, surprisingly, you do precisely the same thing on the next level. Sometimes you collect power-ups. Sometimes you don't.

Control is via the mouse. The cursor hovers around your ship; to move, you need only nudge it in the appropriate direction and off you go. Holding down the mouse button while moving locks the ship on course and activates the guns; so as long as you keep the button down, you can fire in eight directions by twiddling the mouse. Unfortunately, this leads to a great deal of planet-bashing as you tend to concentrate on firing and forget where you're flying.

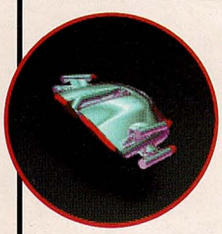
The offensive mines slowly make their way towards Earth, but while you're busy working out how to get to them using the radar scanner, asteroids, planets and other ships do their damnedest to ruin your day by sapping your energy, so you need to locate and fly through energy rings for a top-up.

MacPlay seems to be unreasonably excited about the new graphics engine used in *Astro Chase 3D*. It's called SAGE (Software Accelerated Graphics Engine) and apparently it's a revolution in something or other. Granted, the game shifts at an amazing speed and the 3D graphics have been rendered with loving detail, but to speed up the display, the programmers have only drawn every other line of the on-screen sprites, so each one has a bizarre stripey look. This isn't as bad as it sounds... Well, yes it is, actually. If you stand four feet away from the screen and squint, it's reasonable. Get up close though, and the majesty of space tends to look like a collection of venetian blinds.

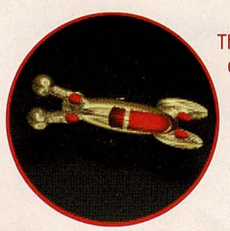
There's no solidity to the sprites' movement and hardly any sense of depth, either. The sound's excellent, though – plenty of spoken warnings and beefy explosion effects.

Of course, effects aren't everything. Unfortunately, the gameplay on offer here just doesn't stand up to repeated play. It's far too repetitive: 40 levels of pure point and shoot action. If you've played *Lunatic Fringe*, the game included with the *After Dark* screensaver, you'll know how it is: brainless fun for five minutes at most. You begin to understand why the manual tries to puff it up as it does. While there are games like *SimCity 2000* available, the occasional spell of blasting just isn't good enough. *Ed Ricketts*

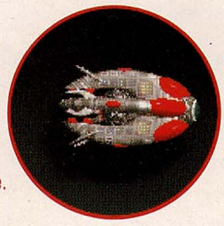
WHEN THE SHIP HITS THE FAN



This one doesn't appear until later on, but when it does, you'll know it. Because it'll show-up on one of those high tech scanner things.



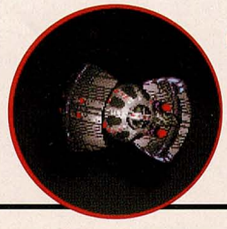
The ability to shoot in any direction is extremely useful, especially when a nasty like this latches on to your rear.



A snappy-looking fellow which buzzes around your craft like a... Well, a snappy, buzzing thing. Erm, very nice.

You only discover the power of most of the enemies when they appear, so it's best to be prepared. Dib, dib and all that.

You might have realised by now, that although the ships look different, they're all much of a muchness when it comes to combat.



George Lucas will undoubtedly be suing. This Tie Fighter-style craft is possibly the best-looking enemy in the game.

ASTRO CHASE 3D

Price: £39.99. From: MacPlay, 0865 390029. Out: now.
Requires: any colour Mac running system 6.0.7 or later.
Controls: mouse, GamePad, MouseStick II.

Graphics 76%
Fast, but only half there, and the sprite movement and depth-cueing are disappointing.

Sound 81%
Excellent speech and effects – "Watch your energy levels!"

Gameplay 57%
Just not enough variety to keep you coming back. Noughts and crosses, anyone?

MACFORMAT RATING 68%

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March 1993

■ **On the disk:** *Lemmings; Disinfectant 2.9*

■ **Inside:** *Morph* and *Publish-It Easy* reviewed; Software roundup

■ Sorry, this issue's completely sold out!

ISSUE 2

May 1993

■ **On the disk:** *Spectre Supreme; SuperClock!*

■ **Inside:** *MacWrite Pro, Painter 2, ClarisWorks 2* reviewed; hardware roundup

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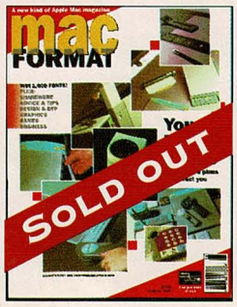


ISSUE 3

August 1993

■ **On the disk:** *Arashi* and *BiPlane*

■ **Inside:** *Paint It!, Colour It!, StuffIt Deluxe* reviewed; The future of the Mac; using charts and graphs

■ Sold out too!

ISSUE 4

September 1993

■ **On the disk:** *Address Book; Ritz Starter Accounts*

■ **Inside:** *Fetch, Image Browser* and *Stacker* reviewed; essential software; Apple's pocket assistant, the Newton

ISSUE 5

October 1993

■ **On the disk:** *Do It All!, PopChar, Greg's Buttons*

■ **Inside:** Computing on the move; PowerCD on test; Photo CD software; 50 *QuarkXPress* tips; PowerBook buyer's guide

ISSUE 6

November 1993

■ **On the disk:** *Civilization, Eclipse, Tetris 2000*

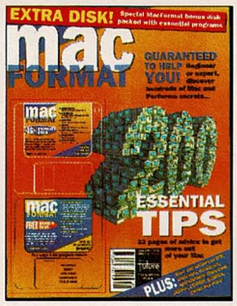
■ **Inside:** How to choose and use a scanner – from hand-helds to flatbeds; *Morph 2, AutoRoute* and *C.A.T.* reviewed; 50 *PageMaker* tips

ISSUE 7

December 1993

■ **On the disk:** *Disinfectant 3.2;* seven handy *Quark* add-ons; a whopping 35 programs in all!

■ **Inside:** Complete guide to comms; *Astound* and *QuickKeys* reviewed



ISSUE 8

January 1994

■ **Double disk issue! On the disks:** *NIH Image, Graphic Converter, Maelstrom*

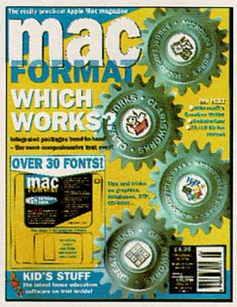
■ **Inside:** Loads of Mac and Performa secrets revealed – 200 top tips in all; Adobe *Dimensions* reviewed

ISSUE 9

February 1994

■ **On the disk:** *SimCity 2000 demo; Greg's Browser; QuarkXPress 3.2* patcher

■ **Inside:** Bumper games guide; *SimCity 2000, FreeHand 4* reviewed; tips for keeping your Mac safe.



ISSUE 10

March 1994

■ **On the disk:** Over 30 indispensable TrueType fonts; *Disinfectant 3.3; Apollo* launcher

■ **Inside:** Integrated Works packages, *Creative Writer* reviewed; clip art

ISSUE 11

April 1994

■ **On the disk:** *ResEdit; SpeedyFinder7; GNU Chess*

■ **Inside:** PowerMacs exclusive; complete guide to your System Folder; printing solutions; chess games reviewed

ISSUE 12

May 1994

■ **On the disk:** *Prince Of Persia 2* demo; *Scrapz*

■ **Inside:** What you can do with shareware; hard disks, removables and optical drives; tips for using colour; *PGA Tour Golf II* reviewed

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Caesar Deluxe

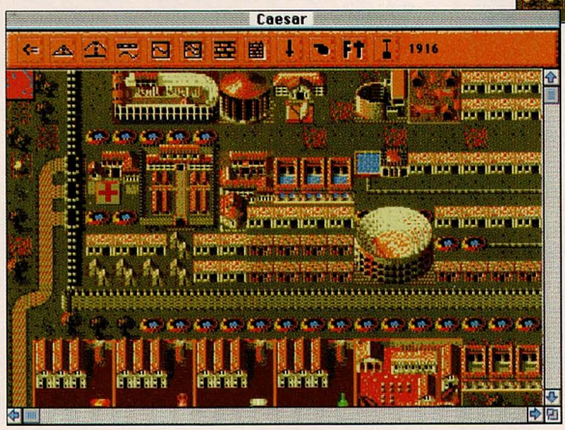
Build factories, roads and houses and citizens will flock to your city to work. Don't forget the bath houses – they were a clean lot, those Romans.

Imperialist dictator required. Must have own tunic and be willing to travel.

It's your first day at work. You've just been appointed governor of a province in the Roman Empire and have travelled thousands of miles to rule it. Then when you get there, there's naff all but a few bushes, a legion of guards, the odd river and some tiny villages. And from this you're expected to build a bustling city. It's not easy – look at Milton Keynes or Stevenage, or the Isle of Dogs for that matter.

Caesar's a 'god-game'. You've got to build a city, defend it and look after its citizens, all while keeping an eye on the accounts. It's no good rushing in headlong and erecting flashy buildings if your citizens haven't got any way of getting to them. And they certainly won't stay if there are no homes or bath houses. Dear me no, Roman – you'll have to be careful.

The entire game is played on a map. To build something, you click the appropriate icon and then click where you want it on the landscape. There are five different building options including the city level (houses, the forum, that kind of thing); the provincial level (guard movements, great walls and forts); the forum (for loads of expert advice and some natty gourds); the infrastructure level (roads, wells, barracks) and the construction level (hospitals, schools and theatres). Build enough of these in the right places and you'll be laughing. Until the barbarians turn up and sack the place, that is.



And here's my wonderful city. It has all the amenities you could possibly imagine including a hospital, school, bath houses, prefect's home and lots of factory space.

Getting to grips with *Caesar* isn't much of a problem, and you can probably find your way around the menus without using the manuals once. You won't be impressed by the cack fonts used, though. Etched-in-stone realism is one thing, but when the graphics look no better than the old Amiga version, then it's just taking the mickey. The presentation is amateurish and the icons on the menu bars look poorly designed. Not what you expect on the Mac.

But what of the gameplay? Well, there aren't many problems there. It's a lot of fun knocking-up a lovely city only to realise you've built the wall too far in and need to knock it down. But on the down side the game is slow. I tried the game on a IIci and a PowerPC, and it plods along at the same naff speed on both. It's especially irritating when you lay a road, pipe or wall and the program leaves out chunks because it can't keep up – and then it won't let you redirect them! I had to knock down brand new walls just because a reservoir pipe was pointing the wrong way.

But the people who're likely to be interested in this game probably won't worry about its speed and graphics deficiencies. Admittedly, *Caesar Deluxe* (he came just after Julius, you know) is an engaging game, especially when you get it right and the population rush into your city. But why can't strategy games (which is about all Impressions do) feel right? I refuse to believe that they couldn't have spent a bit longer polishing up the presentation. You only need to look at *Sim City 2000* to see what can be achieved with a little thought. In effect, it all feels rushed and a bit flimsy – more 'Up Pompeii' than 'Ben Hur'. Still, if you're desperate for some Roman Imperialism and some dry stone walling, then give it a whirl. You can always fiddle while your city burns.

Andy Hutchinson

CAESAR DELUXE

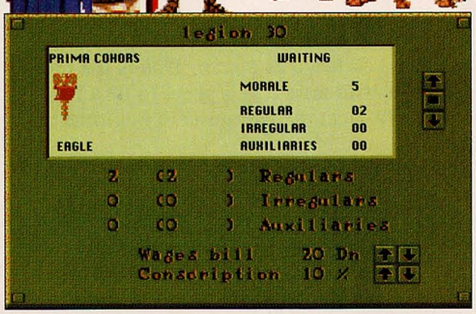
Price: £45. From: Impressions, 0101 617 225 0848. Out: now. Requires: a 256-colour Mac running system 6.0.7 or later. Controls: mouse.

Graphics 70%
Naff, poorly-designed icons and bizarre-looking sprites.

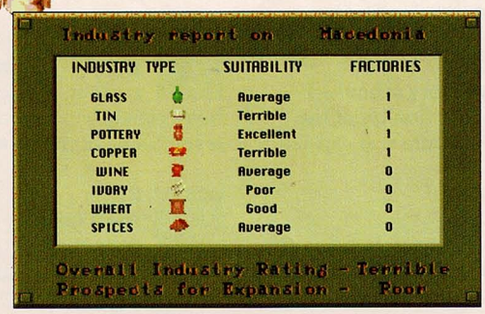
Sound 71%
Not much there really – the odd tune and occasional spot effect.

Gameplay 78%
If you can cope with the lack of speed, you'll love it.

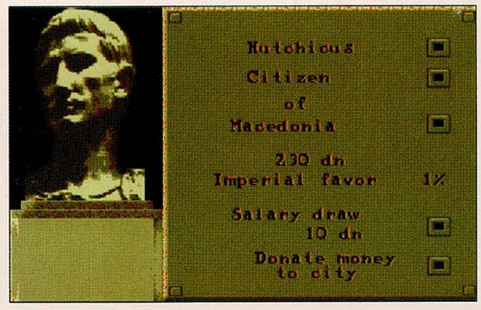
MACFORMAT RATING 72%



Take good care of your soldiers, because there's always a bunch of barbarians on the lookout for cities to sack.



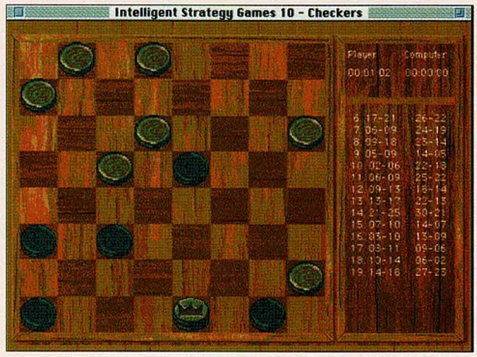
At any stage of the game you can get expert analysis of your factory installations from the forum. I'm not doing well here.



That's me that is, Hutchicus, Governor of the province. Not doing too well on the Imperial Favour front.

Ten intelligent strategy games

Strictly for the intellectually well-endowed, these classic games will test your mental capacities to the limits...



The games tend to look a little functional, but at least that means the Mac's energy is being spent beating you.

As you'd expect, *Ten Intelligent Strategy Games* is a computerised compendium of mind-stretching pastimes. At last, something I could sink my teeth into, something that would test my intellectual mettle, something that would... demoralise me utterly. But more of that later.

Each of the ten is very well presented (just the sort of games you could take home to Mother). They come packed to the gunwales with options and extras, including selectable difficulty levels and the chance to play against a real person. (Real people? It'll never catch on.)

You can also ask the computer to play against itself. Yeah, right, very useful. But it isn't quite as daft as it sounds, actually. I'd already played a couple of the games and, although the instructions gave me the basic rules, it wasn't until I'd watched the machine play a game that I really began to understand what they were all about. So, it is quite useful, after all.

There's one other thing that the games share: they're all jolly difficult. I used to think myself moderately intelligent. Not now. Nine of the ten games can beat me at least nine times out of ten on 'Beginner' level. Pah!

If you like the idea of always having an opponent for your favourite games and of having the chance to learn a few new ones, then *Ten Intelligent Strategy Games* represents pretty good value for money. I'd never have bought a computer version of *Bridge*, for instance, but since I got one thrown in with a bundle of other games I'll take the trouble to learn it.

It's a shame they're all so damn difficult, though.

Tim Norris

10 STRATEGY GAMES

Requires: System 6.0.7 or later; 1Mb free RAM; 4.8Mb Hard Disk space.

Graphics Perfectly adequate.	82%
Sound There isn't any.	N/A
Gameplay As good as the real things.	89%
MACFORMAT RATING	87%

THE GAMES

4 In A Line

Drop counters into a vertical rack to make a row of four of your colour in any direction. I managed to hold the computer to draw only once in 33 games. At beginner level. And this was one of the games I'd played before. And, apparently, it's like *Noughts and Crosses* in that whoever goes first can always win. Pah.

Backgammon

I was beginning to have doubts about the difficulty levels, although a backgammon-playing friend managed to win a few, so it could just be me. The pieces are easy to pick up, but not so simple to put down – if you miss by the slightest bit, your piece whips back to where it started. Not very friendly, that.

Bridge

I'd always wanted to learn *Bridge*, and now I've got a computerised version I can. I had to rely on my *Pan Book Of Card Games* for rules and tactics – the instructions are too brief – but I'm sure I shall soon be giving the servants the evening off and joining the Colonel and his wife for a rubber or two at the Colonial Club.

Checkers

I haven't played *Draughts* since I was at primary school – I don't remember it being quite this hard. The quality of the control and presentation is as good as ever, but I'm sure you can see a pattern beginning to emerge here.

Chess

Computer chess games have been around pretty much ever since there have been computers. (MACFORMAT put four of the best up against each other in issue 11.) This is as good as any I've seen. And it beat me. Often.

Chinese Chess

It's like ordinary chess, only different. There's an extra piece, the cannon. And some of the pieces can only move around their own little bits of the board. And the centre line represents the Yellow River. And only certain pieces can cross it. And there are a number of other little things that I keep forgetting. Complex, isn't it?

Go

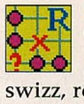
Another oriental battle game, this time involving the capture of land using black and white stones. Thankfully, this hugely time-consuming game can be scaled down on to a small board to speed things up a little and to make it simpler for beginners. And a good thing, too.

Gomoku

A 'five in a row' game played on a *Go* board. *Noughts and Crosses* for grown-ups, really, and quite amusing for that. The instructions tell me that I'll soon work out how to win every time. Yeah, right.

Othello

The tile-turning game, also known as *Reversi*. This is the one game in the set where the difficulty levels seem to be a bit more sensibly set – I could actually beat the computer at beginner level. Some of the time.



Renju

The Japanese version of *Gomoku* with slightly different rules. It's a strange thing to include and I thought it was a bit of a swizz, really. If I've already got *Gomoku*, why do I want this? It's different, but not enough to make it worth including. Surely there must have been another, completely different, strategic game to include.

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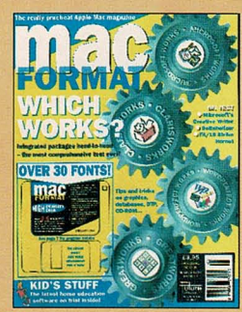

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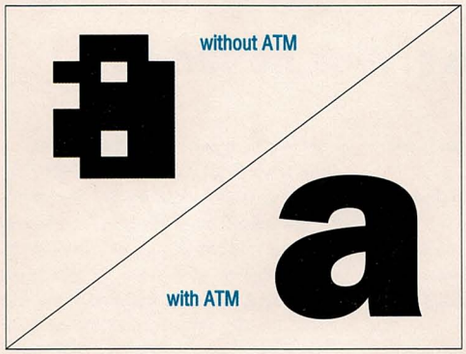

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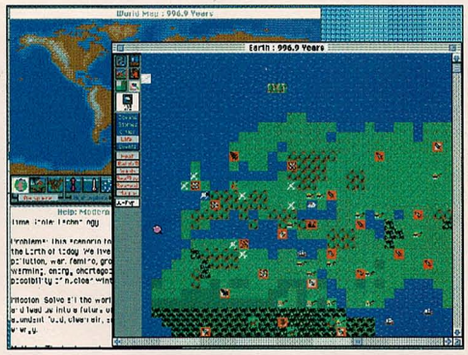

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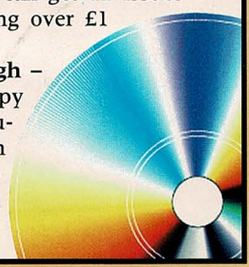

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■ Group of users with a regular newsletter via ICR computing service. Workshops for training, software and hardware support in a PC-dominated environment. Contact Raymond Henry, Haddow Labs, ICR, Sutton SM2 5NG. (MF 16)
■ MacAssist, Cardiff and district. Tel: Nigel Arrighi on 0222 224682.
■ Mac user group. Send large SAE for free newsletter. All levels. Non commercial. Ref MF, 9 Burrill Drive, Wiggington, York YO3 3ST. (MF 16)
■ Macintosh Association of Users in EEC, 4 Chiou, Athens, 15231, Greece. Tel 6725485. Meetings Wednesdays 8–10pm, Saturdays and Sundays 12–2pm. We are a non-profit organisation. Please help us by donating books (misprinted, used; by surface mail), disks, programs, CD-ROMs etc for our library and program for the handicapped. (MF 16)
■ Mactivity International – the biggest user group in Europe. Divisions in Scandinavia, Estonia, Germany, Benelux. The only number we have at the moment is: Belgium Tel. 32 80 64 77 13. (MF 16)
■ Midapple, West Midlands. Tel: William Watson on 0384 277921.
■ Midland Mag UG, Worcestershire. Tel: Ivan Knezovich on 0299 402631.
■ National postal user group. Monthly newsletter on disk. Includes competitions, special offers, reviews, cover disk, etc. Send a self addressed envelope for info to: Mac Shareware User Group (MSUG), 21 Milldown Avenue, Goring-on-Thames, Reading RG8 0AS. (MF 16)
■ North West Apple C.C – Cheshire area, North. Telephone: Mr George Evans on 0270 583714.
■ Nottingham Mac UG. Tel: David Nicholson-Cole on 0602 455077.
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■ Southwest Mac User Group, Bristol. Tel: John Elver on 0272 693119.
■ Staffs Poly Mac UG, Staffordshire. Tel: Mark Stiles on 0785 52331.
■ Stavanger Macintosh User Group was established in 1986 and has over 50 members. It normally has eight meetings a year on various topics. Contact Jan Frick, Chairman, Rogaland University Centre, PO Box 2557, Vllandhaug, N-4004 Stavanger, Norway. (MF 16)
■ Sussex User Group, Hastings, East Sussex. Tel: Garry Nevin on 0424 714110.
■ The Computer Textile Design Group. We are trying to build up a panel of advisors who can help inexperienced computer users with their problems. For more info contact Maggie Dunn, Wynnstay Cottage, Lamin Gap Lane, The Fosse, Cotgrave, Notts NG12 3HG, enclosing an self-addressed envelope for a membership form. (MF 16)
■ The Southwest Macintosh Users Association. Membership is £17 pa, but the first 100 applications will be given founder member status. Contact the Club Secretary, SMUA, Firs, Rackstile, Wadeford, Chard, Somerset TA20 3AP. (MF 16)
■ The United Shareware User Grounp meet Portuguese Mac users and our Shareware – Pra. Ferreira de Castro 1-3 Dto, Coruaxide 2795, Portugal (MF 19)
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Small observations? Try the Tiny Zone!

Hello and welcome again to the Tiny Zone, the section of MACFORMAT that really is designed for small talk. This month we've been getting to know our brand-spanking-new office PowerMac 6100, and conversation has inevitably turned to the subject of design. We're wondering why Apple decided to slap the whiz-bang new PowerPC Macs into that odd old pizza-box casing. OK, so there's a neat modular opportunity there for adding an internal CD-ROM drive, but 'small footprint' is just about the last phrase that springs unbidden to the lips. And then there's that all-too-alluring power button sited just below the disk drive. Now, correct me if Tiny Zone is just being small-minded here, but if the PowerMac is the machine to bridge the chasm between PC-compatibles and Macs, how is this going to look to people used to PCs, which have disk eject buttons? Anyone else see a vision of thousands of PowerMacs inadvertently being shut down at the most crucial moments by innocent users who only meant to eject a disk? Us, we have enough problems with our old IIci's power and reset buttons – you know, the little tabs that stick out of the front of the case, at precisely the same height as the back of your keyboard? Every time you push your keyboard back on your desk ever so gently, it's lost work city. It would be annoying, the way Apple's designers keep moving all the buttons around like that, except that it means there's a remote chance they'll get it right one day... But then, even what they *mean* to do is not always a good idea. Take those 'integral wrist-rests' on PowerBooks. When I learned to type, I read that you should sit with your forearms horizontal and your hands just above the keys; resting your wrists on anything meant more strain on the tendons as you raised your fingers and therefore more risk of injury, from RSI to Carpal Tunnel Syndrome. High price to pay for dodgy design decisions...

Next month

The future is here, and its name is multimedia. Interactive encyclopaedias that offer you not just text and pictures but the spoken word and animations as well. Education software that can be truly responsive to your input. Games that give you whole new worlds to explore on your Mac, complete with digitised speech and effects. Peter Gabriel or John Lennon as you've never seen them, guiding you through their works and their lives, complete with movie clips and hi-fi sound.

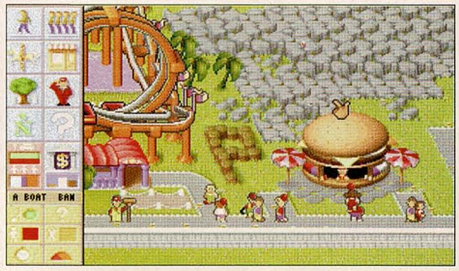
And that's not the half of it. Well, actually, that *is* about half. But the other half is even more exciting – you can not only experience multimedia; you can also produce your own animations, edit your own Mac movies, or create your own multi-media presentations, and it doesn't take a top-of-the-range Mac and thousands of quids' worth of software. Next issue we'll explore the whole dazzling world of multimedia *and* show you just how easy it is to do it yourself!

■ PLUS How you can make music on your Mac without any extra equipment, *and* a guide to shareware music programs, *plus* all you need to get started is yours on the cover disk! If multimedia seems too daunting, try Mac music making with MACFORMAT!

■ Mention 'computer art' and most people think of pixels and bitmaps and screen images. But in fact you can do anything on your Mac that you could do with 'traditional' media like chalk, watercolour or pastels. Next month we launch a major new series in MACFORMAT guiding you through 'natural media' techniques. Whatever paint software you use, we'll show you how to get dazzling results from it.

■ PLUS The latest news from around the world; the hottest Mac games, including the fabulous sequel to *Populous*, which earned a MACFORMAT rating of 93% in issue 9; a talking spreadsheet program; a gorgeous 3D graphics package; all you need to know to end your colour trapping hassles; your Mac problems solved in MacAnswers; and MACFORMAT's regular comprehensive coverage of just about everything you can do with a Mac!

Konichiwa. Yes, it's me again, the mysterious shadowy figure from *Cosmology of Kyoto*. This useless lot didn't find room to review *Kyoto* this issue. They'd better manage it next time, or there will be much bloodshed and weeping. That's *Cosmology of Kyoto*. Next issue, without fail. I trust I make myself clear.



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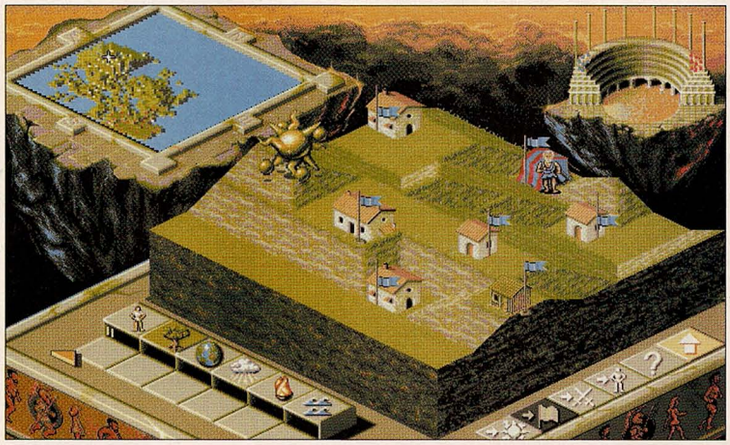
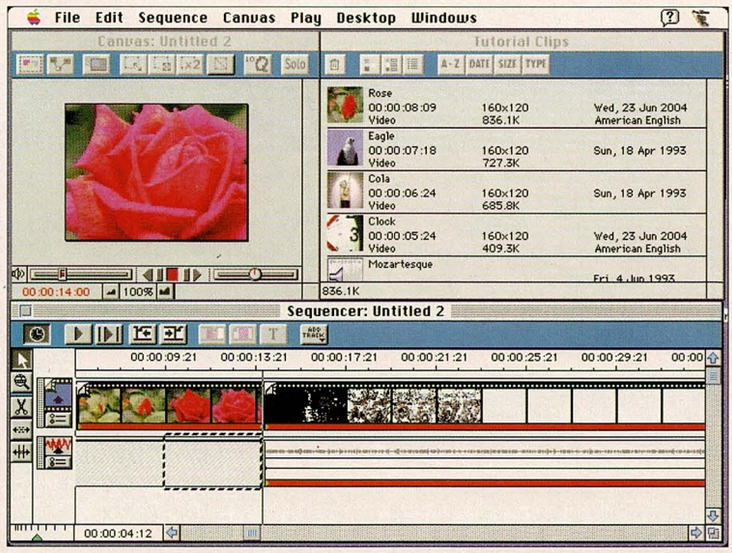


Play god in *Populous II*. That's it in a nutshell, really. (MACFORMAT's Andy Hutchinson reckons he invented the term 'god-game', by the way. And he wishes he'd thought to patent it now...)



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THE QUESTIONS

1. 'CD-ROM' stands for:
(a) Compact Disc Rack Oscillation Module
(b) Compact Disc Read-Only Memory
(c) Can Daddy Really Orchestrate, Mummy?

2. What is *QuickTime*?
(a) Fast data playback (analogous to 'quick march')
(b) The double-speed (or more) spin rate of the disc
(c) Apple's system for playing a kind of video on Macs

3. Which of these is *not* usually included in 'multimedia'?
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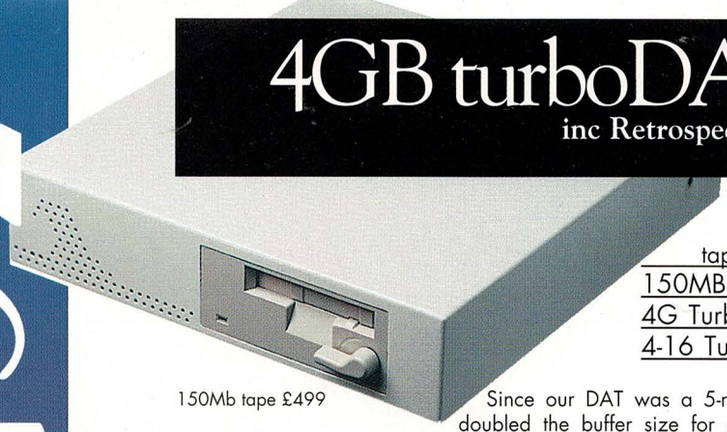

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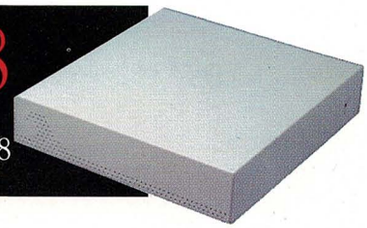

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